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United States
Department of
Agriculture

Soil
Conservation
Service

Portland,
Oregon

Oregon Water Supply Outlook

January 1, 1986

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Foreward

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 95802; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Oregon Water Supply Outlook

and

Federal – State – Private Cooperative Snow Surveys

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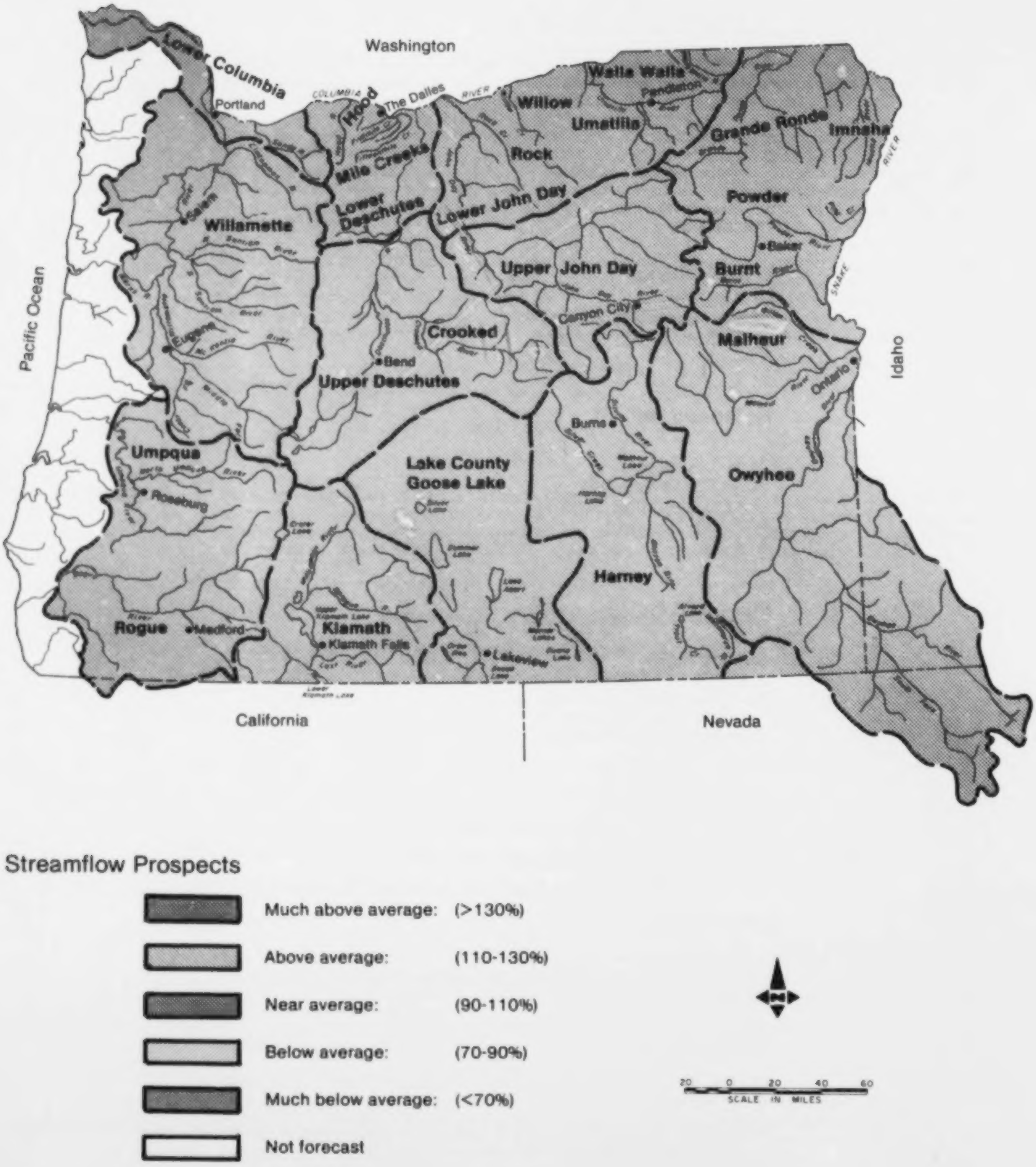
Streamflow Prospects for Oregon

Spring and Summer Period



GENERAL OUTLOOK

SUMMARY:

Streamflow is forecast to be near normal throughout Oregon this spring and summer. The mountain snowpack is near to above average. Winter precipitation is below average. Reservoir storage is 113% of the January 1 normal.

SNOWPACK:

The mountain snowpack is near normal in the Cascades. It increases to above normal in eastern Oregon. Harney and Malheur Counties have a much above normal snowpack again this year. The much below normal temperatures during November and part of December caused the mountain precipitation to fall mainly as snow. These temperatures then prevented the snow from melting. This is the reason for the heavy snowpack considering the below normal precipitation.

PRECIPITATION:

Precipitation during December was very low. The two best areas in the state were Malheur County (70% of normal) and the Deschutes/Crooked drainage basins (78% of normal). Harney County was 53% of normal. The rest of the state was below 40% of normal. Precipitation for the water year to date ranges from 58 to 84 percent. The heavier amounts were in south eastern Oregon. The southern Cascades had the lowest amounts (below 60%) while the rest of the state had about 75% of normal amounts.

RESERVOIRS:

Twenty-seven principle irrigation reservoirs currently contain 1,846,100 acre feet of storage. This is 113% of the January 1 average and 56% of capacity.

STREAMFLOW:

Streamflow has been near normal east of the Cascades. West of the Cascades it has been below normal. Prospective streamflow as a percent of average on representative Oregon streams is as follows:

STREAM	PERIOD	% OF AVERAGE
OWYHEE NET INFLOW	FEB-JUL	109%
GRANDE RONDE AT LAGRANDE	MAR-SEP	89%
UMATILLA AT PENDLETON	MAR-SEP	100%
DESCHUTES AT BENHAM FALLS	APR-SEP	97%
WILLAMETTE MF NR OAKRIDGE	APR-SEP	105%
ROGUE AT RAYGOLD	APR-SEP	100%
UPP. KLAMATH LK NET INFLOW	APR-SEP	96%
SILVIES NEAR BURNS	MAR-JUL	100%

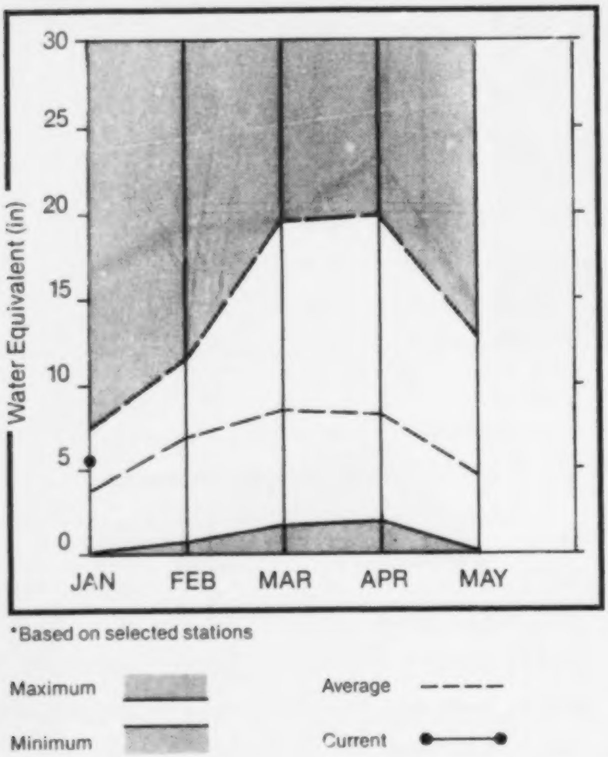
Malheur Lake in Harney County is expected to continue to rise. The July 1 level is forecast to be 4101.20 feet with a surface of 114,600 acres. This is a 0.60 foot rise from last November 1. The normal surface of this lake on July 1 is 40,000 acres.

These forecasts assume normal weather conditions will occur throughout the forecast period. The forecasts in this bulletin are a result of coordinated activity between the Soil Conservation Service and the National Weather Service in an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA, National Weather Service and other cooperators.

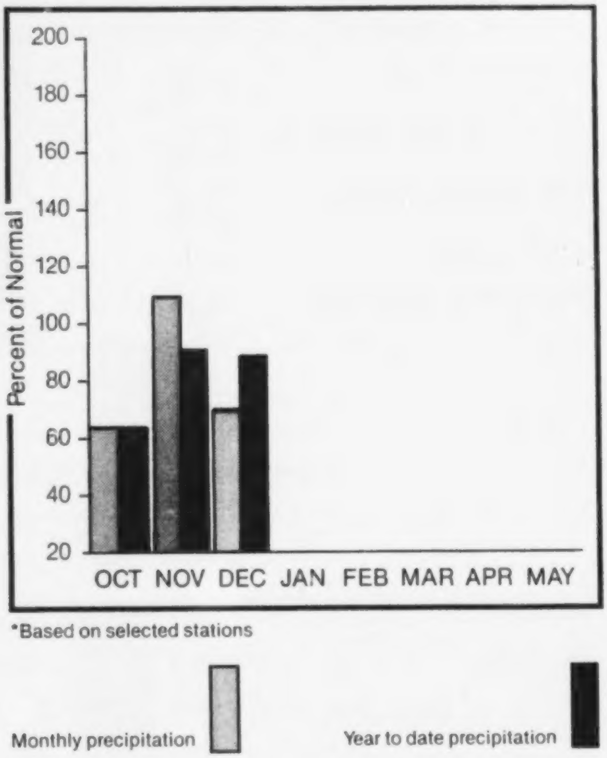
Owyhee and Malheur Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Summer streamflow is forecast to be near normal. The mountain snowpack is much above average and is the highest in the state. Precipitation during December was 70% of normal. For the October-December winter period it has been 84% of normal (again this is the highest percentage in Oregon). Reservoir storage is good with Beulah and Owyhee above average for this time of year.

For more information contact your local Soil Conservation Service office.

OWYHEE AND MALHEUR BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BULLY CREEK at Warmsprings	MAR-MAY	14.4	[illegible]	[illegible]	173.6	27.8				
MALHEUR near Drewsey	FEB-JUL	106.3	[illegible]	[illegible]	140.2	30.1				
	APR-SEP	69.6	[illegible]	[illegible]	142.2	41.7				
MALHEUR, NORTH FORK at Beulah *	FEB-JUL	78.9	[illegible]	[illegible]	154.6	44.4				
	APR-SEP	62.8	[illegible]	101.0	156.1	46.2				
OWYHEE RESERVOIR net Inflow	FEB-JUL	561.1	[illegible]	[illegible]	162.0	57.9				
	APR-SEP	376.1	[illegible]	[illegible]	178.1	42.0				
OWYHEE nr Rome *	FEB-JUL	597.9	[illegible]	[illegible]	162.1	58.0				
SUCCOR CREEK nr Jordan Valley	FEB-JUL	16.2	[illegible]	[illegible]	160.5	49.4				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BEULAH RES	60.0	[illegible]	34.9	17.5
BULLY CREEK	30.0	[illegible]	15.8	10.0
OWYHEE	715.0	[illegible]	583.4	394.6
WARMSPRINGS	191.0	[illegible]	130.6	67.5

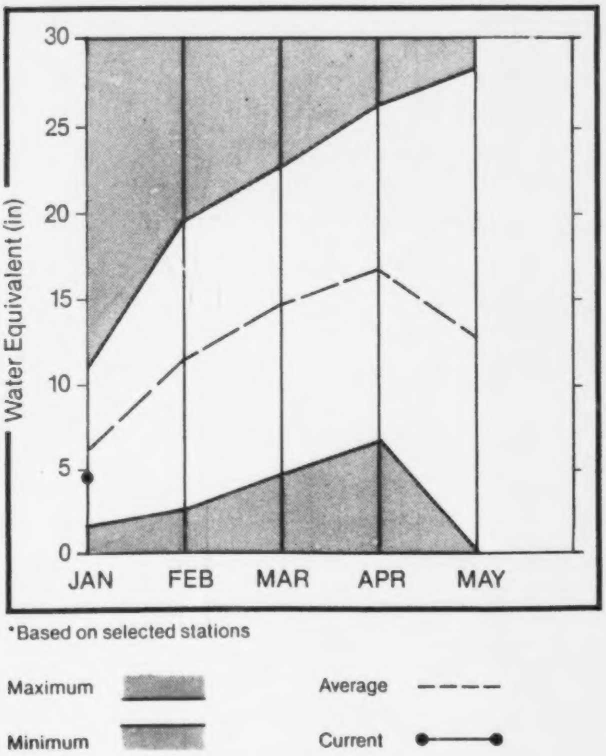
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Owyhee River	8	84	[illegible]
Malheur	5	66	[illegible]
Jordan Creek	1	77	[illegible]
Bully Creek	0	0	0

*Corrected for upstream diversions or changes in reservoir storage..
Average is for 1961-80 period.

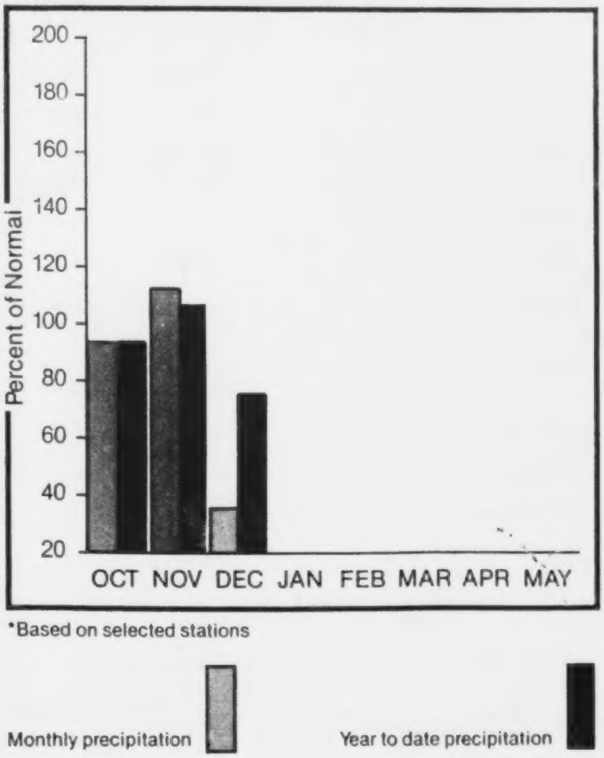
Burnt, Powder, Grande Ronde, and Imnaha Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflow this summer should be near normal. The forecasts range from 89% to 105% of average. The mountain snowpack is 116% of average. December precipitation has been very low (36% of average). For the winter season it has been 75% of normal. Reservoir storage is good with Phillips Lake and Unity reservoir containing above average amounts of water.

For more information contact your local Soil Conservation Service office.

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
ANTHONY CREEK blw NF nr Powder	FEB-JUL	17.3	18.2	105.0	138.7	69.4				
BEAR CREEK near Wallowa	APR-SEP	65.6	62.5	95.0	125.0	65.5				
BIG CREEK blw Burn Ck	FEB-JUL	12.5	12.2	97.0	128.0	64.0				
BURNT near Hereford *	FEB-JUL	48.1	48.1	99.0	145.5	54.1				
	APR-SEP	34.3	34.3	100.0	154.5	43.7				
CATHERINE CK near Union	APR-SEP	63.7	62.1	97.0	127.2	67.5				
DEER CK near Sumpter	FEB-JUL	18.4	17.1	93.0	135.9	54.3				
EAGLE CK above Skull Ck	APR-JUL	168.9	165.3	97.0	127.9	68.1				
	APR-SEP	184.2	181.0	98.0	128.1	68.4				
GRANDE RONDE at LaGrande	MAR-JUL	197.6	179.0	90.0	156.9	12.7				
	APR-SEP	161.9	145.7	89.0	156.9	14.8				
HURRICANE CK near Joseph	APR-SEP	45.8	44.3	96.0	122.3	72.1				
IMNAHA at Imnaha	APR-SEP	300.7	285.7	95.0	130.0	69.8				
LOSTINE near Lostine	APR-SEP	122.9	110.6	89.0	114.7	73.2				
PINE CREEK near Oxbow	FEB-JUL	238.3	226.4	95.0	130.1	35.7				
POWDER near Sumpter *	APR-JUL	55.7	52.4	94.0	136.4	53.9				
	APR-SEP	56.8	54.0	95.0	135.6	61.6				
WALLOWA LAKE near Joseph	FEB-SEP	12.4	12.0	96.0	129.0	64.5				
	APR-SEP	11.1	10.7	96.0	126.1	63.1				
WALLOWA RIVER at Joseph *	APR-JUL	71.6	71.6	100.0	128.5	72.6				
WOLF CK RESERVOIR net Inflow	MAR-JUN	13.7	14.8	108.0	146.0	80.3				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
PHILLIPS LAKE	73.5	37.6	61.8	24.9
THIEF VALLEY	17.4	NO REPORT		14.1
UNITY	25.2	12.1	14.8	8.8
WALLOWA LAKE	37.5	15.9	17.6	20.0
WOLF CREEK	10.4	2.9	4.4	---

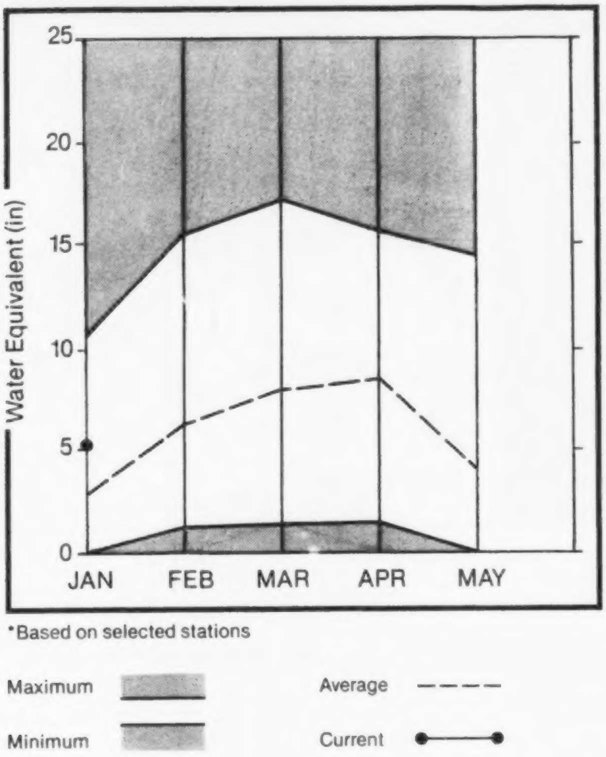
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Grande Ronde ab LaGrande	5	64	105
Powder River	5	70	107
Wallowa,Imnaha,Catherine	0	0	0
Burnt River	4	53	73

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

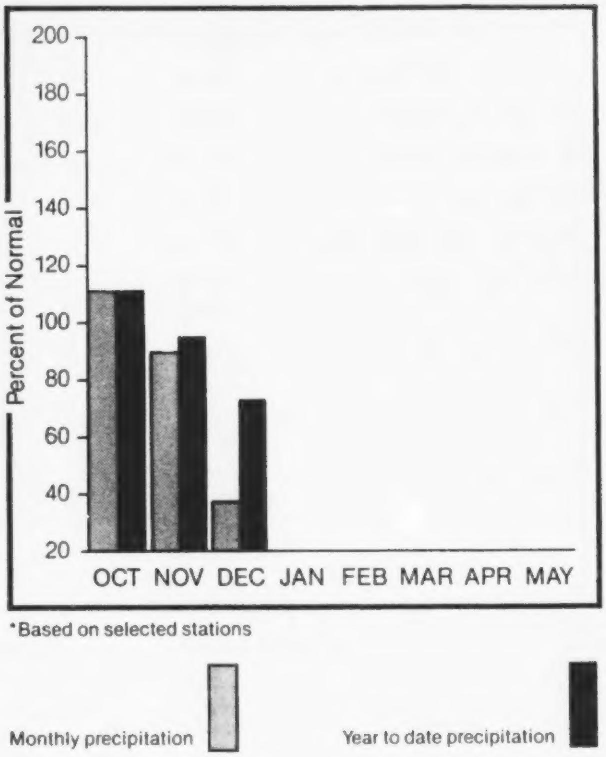
Umatilla, Walla Walla, Willow Rock, and Lower John Day Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Summer water supplies are forecast to be near normal to below normal this year. Streamflows should range from 82% to 102% of normal. Unusually cold temperatures during November and early December helped the mountain snowpack accumulate to 127% of average. This occurred even though the precipitation has been very low. December total was only 38% of average and for the October-December period it has been 72%. Reservoir storage is below average.

For more information contact your local Soil Conservation Service office.

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BUTTER CK NEAR PINE CITY	MAR-JUL	11.6	10.7	92.0	146.6	34.5				
COUSE CK nr Milton Freewater	FEB-JUL	6.8	5.8	85.0	132.4	29.4				
MCKAY near Pilot Rock	APR-SEP	23.8	20.6	86.0	151.3	21.0				
PINE CKEEK near Weston	FEB-SEP	5.6	4.6	82.0	125.0	35.7				
RHEA CREEK near Heppner	FEB-JUL	9.3	7.9	84.0	139.8	32.3				
ROCK CREEK above Cayuse Canyon	FEB-JUL	19.8	20.3	102.0	151.5	50.5				
UMATILLA near Gibbon	MAR-SEP APR-SEP	98.6 76.7	98.6 76.7	100.0 100.0	141.0 140.8	46.7 58.7				
UMATILLA near Pendleton	MAR-SEP APR-SEP	203.8 146.9	203.8 146.9	100.0 100.0	149.2 147.7	51.0 51.7				
SF WALLA WALLA nr MiltonFreewater	MAR-SEP APR-SEP	99.0 99.0	90.0 89.0	90.0 89.0	118.2 115.2	46.5 36.4				
WILLOW CREEK near Heppner	FEB-JUL	9.4	9.3	98.0	148.9	42.6				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COLD SPRINGS	50.0	3.8	15.1	17.3
MCKAY	73.8	18.8	30.6	19.6

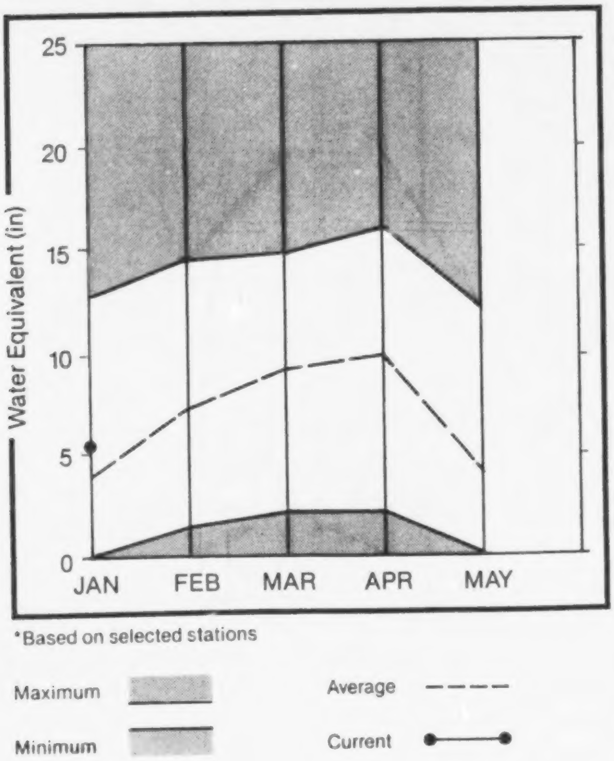
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Walla Walla River	0	0	0
Umatilla River	4	62	127
McKay Creek	3	57	111

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

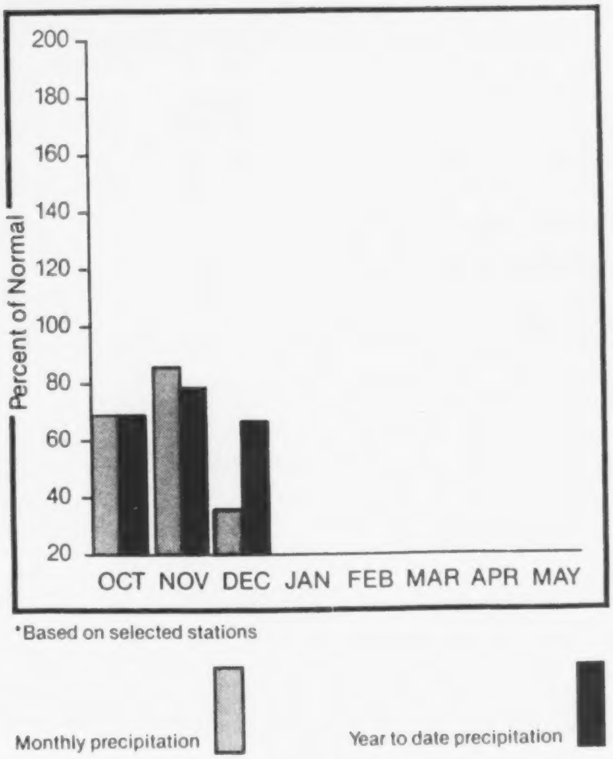
Upper John Day Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

The Upper John Day streamflows are forecast to be near normal this summer. The snowpack has accumulated to 116% of average. The December precipitation was only 36% of normal. During the October-December period it has been 63%. Very cold temperatures during November and early December accounted for the above average snowpack from a below normal precipitation period.

For more information contact your local Soil Conservation Service office.

UPPER JOHN DAY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CAMAS CREEK nr Ukiah	MAR-JUL	43.5	**43.2**	**99.0**	149.4	48.3				
	APR-SEP	34.2	**34.2**	**100.0**	149.1	50.5				
MF JOHN DAY at Ritter	MAR-JUL	133.0	**133.0**	**100.0**	144.4	55.6				
	APR-SEP	112.0	**112.0**	**100.0**	143.7	56.2				
NF JOHN DAY at Monument	MAR-JUL	658.3	**599.0**	**91.0**	135.0	47.1				
	APR-SEP	549.4	**506.3**	**92.0**	136.1	48.2				
MOUNTAIN CREEK near Mitchell	FEB-JUL	5.1	**4.5**	**87.0**	137.3	39.2				
STRAWBERRY CREEK nr Prairie City	MAR-JUL	7.3	**6.3**	**86.0**	123.3	54.8				
	APR-SEP	7.8	**6.6**	**84.0**	115.4	51.3				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

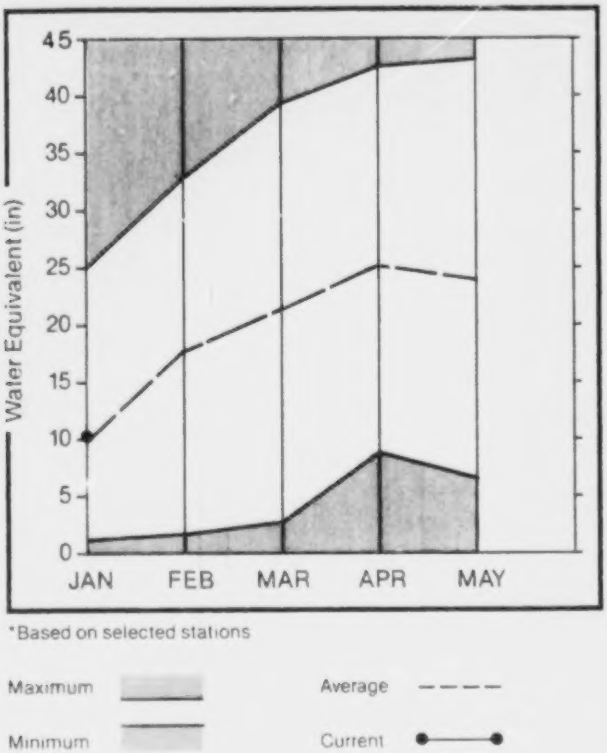
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
John Day, North Fork	7	64	**110**
John Day above Dayville	7	55	**103**

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

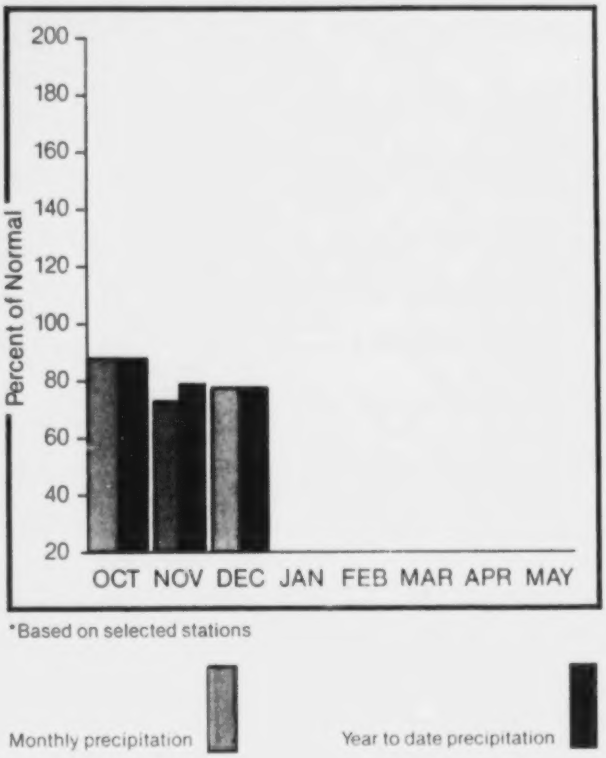
Upper Deschutes and Crooked Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies in the Deschutes and Crooked River basins are forecast to be near normal this year. Streamflows should range from 91% to 110% of average. The mountain snowpack is 109% of average. December precipitation was the heaviest in the state at 78% of normal. For the October-December period, it has also been 78%. Reservoir storage is very good in the area. All are above average except Prineville which is still good at 97% of average.

For more information contact your local Soil Conservation Service office.

UPPER DESCHUTES AND CROOKED BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BEAVER CREEK nr Paulina	FEB-JUL	40.9	42.5	103.0	154.0	53.8				
	APR-SEP	16.8	17.7	105.0	148.8	59.5				
CRANE PRAIRIE RES net Inflow *	FEB-JUL	98.8	108.7	110.0	149.8	69.8				
	APR-SEP	113.2	124.5	109.0	154.6	65.4				
CRESCENT CK nr Crescent Lake *	MAR-JUL	18.8	18.8	100.0	148.9	47.9				
	APR-SEP	19.9	19.9	100.0	155.8	45.2				
CROOKED nr Prineville *	FEB-JUL	176.6	194.0	109.0	168.7	51.0				
	APR-SEP	93.9	103.0	109.0	168.3	51.1				
NF CROOKED blw Lookout Ck	FEB-JUL	14.9	13.4	89.0	154.4	40.3				
DESCHUTES at Benham Falls *	APR-JUL	352.9	352.7	100.0	130.1	70.0				
	APR-SEP	539.9	529.0	97.0	130.0	65.9				
DESCHUTES below Snow Creek	FEB-SEP	71.3	74.3	104.0	143.1	65.9				
	APR-SEP	59.3	61.3	103.0	143.3	64.1				
LITTLE DESCHUTES nr Lapine *	FEB-JUL	95.5	87.8	92.0	131.9	52.4				
	APR-SEP	77.3	71.1	92.0	139.7	44.0				
OCHOCO RESERVOIR net Inflow	FEB-JUL	31.9	25.3	79.0	166.1	15.7				
	APR-SEP	17.7	14.1	79.0	163.8	16.9				
SQUAW CREEK nr Sisters	APR-SEP	47.7	48.4	101.0	130.0	73.4				
TUMALO CREEK near Bend *	APR-SEP	44.3	45.1	102.0	124.2	79.0				

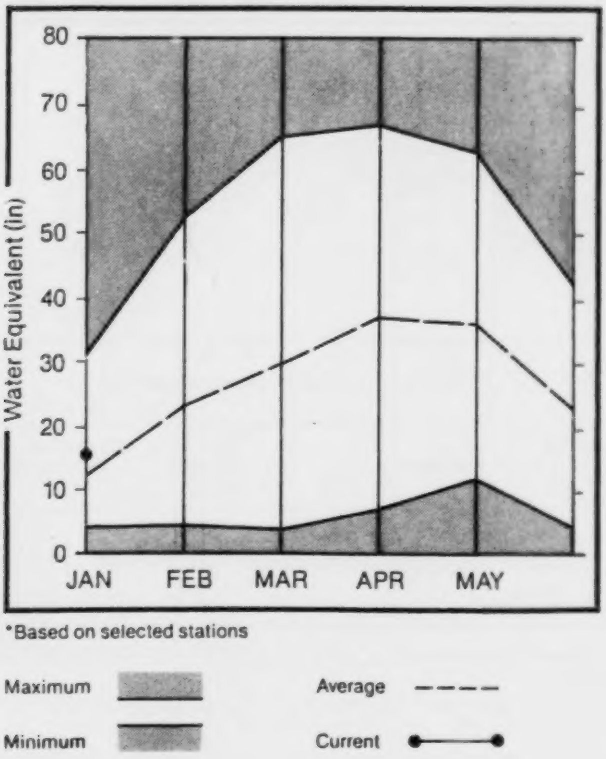
RESERVOIR STORAGE (1000AF)				
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CRANE PRAIRIE	55.3	45.1	39.0	38.5
CRESCENT LAKE	86.9	71.6	86.5	46.7
OCHOCO	47.5	18.9	27.4	16.3
PRINEVILLE	153.0	92.9	85.6	95.7
WICKIUP	200.0	166.5	172.0	130.2

WATERSHED SNOWPACK ANALYSIS			
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Crooked, Ochoco	2	70	131
Deschutes above Wickiup	2	42	72
Little Deschutes	2	58	115
Tumalo and Squaw Creeks	3	49	87

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

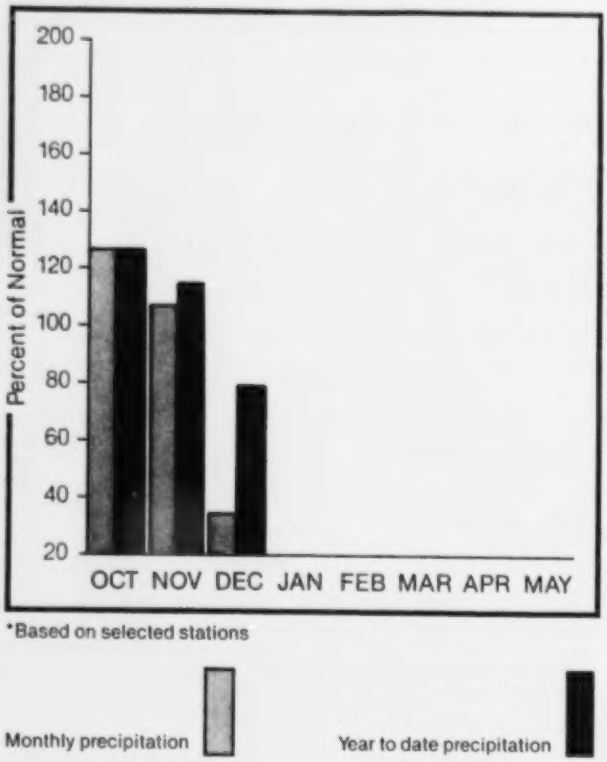
Hood, Mile Creeks, and Lower Deschutes Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

The Mt. Hood area should experience near normal water supplies this year. Streamflow forecasts range from 100 to 104% of average. The mountain snowpack is 111% of the January 1 average. Precipitation has been very low. December only had 34% of normal while for the water year to date it has been 79%. Clear Lake reservoir content currently is 166% of the January 1 average.

For more information contact your local Soil Conservation Service office.

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
HOOD RIVER near Tucker Bridge *	APR-JUL	238.2	[illegible]	[illegible]	138.1	70.1				
	APR-SEP	285.3	296.7	[illegible]	138.1	70.1				
WEST FORK HOOD RIVER nr Dee	APR-JUL	124.9	131.0	104.0	140.1	69.7				
	APR-SEP	146.4	[illegible]	[illegible]	140.7	69.0				
WHITE RIVER below Tygh Valley	APR-JUL	112.5	112.5	100.0	137.8	62.2				
	APR-SEP	127.5	127.5	100.0	135.7	64.3				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (WASCO)	11.9	5.3	1.1	3.2

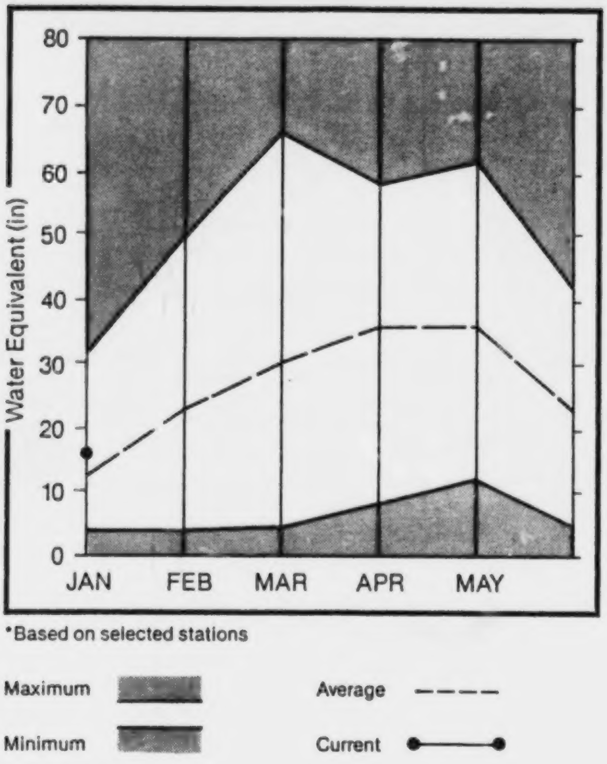
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Hood River	3	41	112
Mile Creeks	0	0	0
White River	2	40	97

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

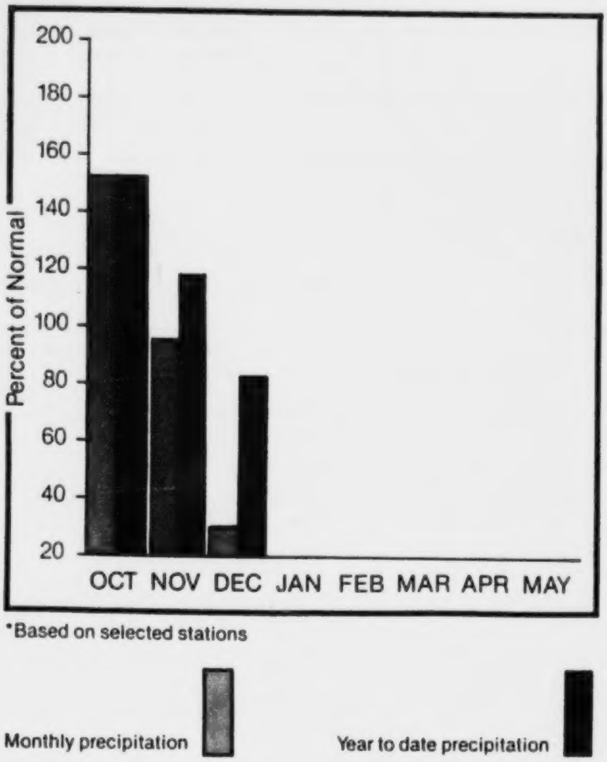
Lower Columbia Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

The Columbia River at The Dalles is forecast to flow at 90% of normal this spring and summer, while the Sandy River will be higher at 98%. The snowpack in the Columbia basin above The Dalles is 80% of normal. The Columbia basin precipitation during December was only 30% of average while it has been 81% for the water year to date.

For more information contact your local Soil Conservation Service office.

LOWER COLUMBIA BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COLUMBIA at The Dalles *	APR-JUL	86500.0	78300.0	90.0	116.5	64.5				
	APR-SEP	101000.0	91500.0	90.0	116.6	64.6				
SANDY RIVER near Marmot	APR-JUL	327.1	320.0	97.0	134.8	60.8				
	APR-SEP	380.8	373.2	98.0	135.0	60.9				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

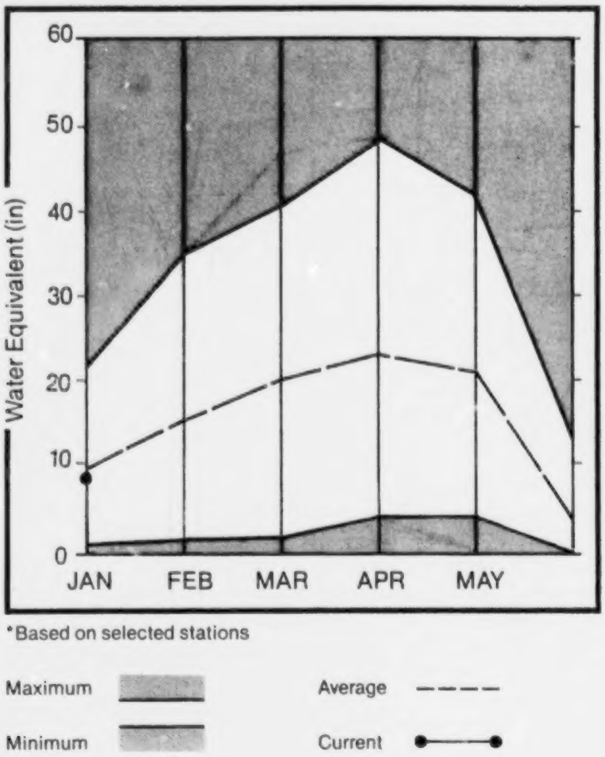
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Sandy River	2	40	99

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Page 30 for more information.

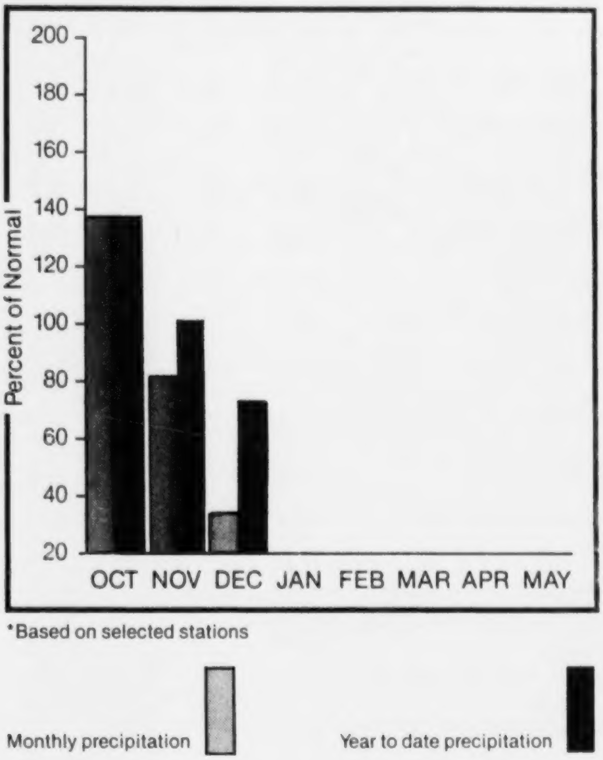
Willamette Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies in the Willamette basin should be near normal this year. The forecast ranges from 89% to 110% of average. December precipitation has been the lowest in the state at 34% of average. For the October-December period it has been 73%. The irrigation reservoirs in the area currently contain above average amounts of stored water.

For more information contact your local Soil Conservation Service office.

WILLAMETTE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBACLE (1000AF)	MOST PROCABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLACKAMAS at Estacada *	APR-JUL	652.0	652.0	100.0	130.1	69.9				
	APR-SEP	764.0	764.0	100.0	130.0	70.0				
CLACKAMAS above Three Lynx *	APR-JUL	494.9	493.0	[illegible]	129.5	69.7				
	APR-SEP	507.3	506.0	99.6	129.7	69.8				
MCKENZIE at McKenzie Bridge *	APR-JUL	440.4	374.0	[illegible]	114.9	64.9				
	APR-SEP	584.9	526.0	[illegible]	114.9	65.0				
MCKENZIE near Vida *	APR-JUL	994.3	[illegible]	[illegible]	116.1	64.0				
	APR-SEP	1222.9	1100.6	[illegible]	116.0	64.0				
SF MCKENZIE nr Rainbow *	APR-JUL	201.9	[illegible]	[illegible]	118.9	62.9				
	APR-SEP	228.9	[illegible]	[illegible]	117.1	64.7				
MOHAWK near Springfield	FEB-JUL	165.6	[illegible]	[illegible]	140.1	70.0				
OAK GROVE FORK ab Power Intake *	APR-JUL	131.4	[illegible]	[illegible]	124.8	60.9				
	APR-SEP	167.3	[illegible]	[illegible]	125.5	61.6				
ROW near Dorena	APR-JUL	98.6	[illegible]	[illegible]	137.9	45.6				
	APR-SEP	104.4	[illegible]	[illegible]	137.9	46.0				
NORTH SANTIAM at Mehama *	APR-JUL	731.2	[illegible]	[illegible]	139.9	80.0				
	APR-SEP	830.1	[illegible]	[illegible]	140.0	80.1				
SOUTH SANTIAM at Waterloo *	APR-JUL	534.4	[illegible]	[illegible]	147.1	67.0				
	APR-SEP	577.7	[illegible]	[illegible]	147.0	67.0				
SCOGGINS CREEK near Gaston	FEB-JUL	44.8	[illegible]	[illegible]	125.0	44.6				
THOMAS CREEK nr Scio	FEB-JUL	158.8	[illegible]	[illegible]	144.2	64.2				
COAST FORK WILLAMETTE at London	APR-JUL	27.8	[illegible]	[illegible]	140.3	71.9				
MF WILLAMETTE blw NF nr Oakridge *	APR-JUL	667.9	[illegible]	[illegible]	140.0	69.9				
	APR-SEP	763.8	[illegible]	[illegible]	139.0	71.0				
NF OF MF WILLAMETTE nr Oakridge	APR-JUL	182.3	[illegible]	[illegible]	133.8	65.8				
	APR-SEP	203.9	[illegible]	[illegible]	133.4	65.7				
WILLAMETTE at Salem *	APR-JUL	4171.1	[illegible]	[illegible]	144.0	64.0				
	APR-SEP	4655.0	[illegible]	[illegible]	144.0	64.0				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BLUE RIVER	85.6	0.3	0.0	0.9
COTTAGE GROVE	30.0	0.0	0.0	0.9
COUGAR	155.2	0.3	1.9	9.0
DETROIT	299.9	3.3	0.9	27.8
DORENA	70.5	0.0	0.0	3.3
FALL CREEK	115.0	0.0	0.0	0.1
FERN RIDGE	94.2	0.1	0.0	6.4
FOSTER	30.0	0.0	0.7	11.2
GREEN PETER	270.0	2.5	1.6	24.8
HILLS CREEK	200.0	5.7	2.7	14.8
LOOKOUT POINT	337.2	2.5	2.2	27.4
TIMOTHY LAKE	61.7	40.9	52.4	49.5
HENRY HAGG LAKE	53.0	26.2	28.2	27.1

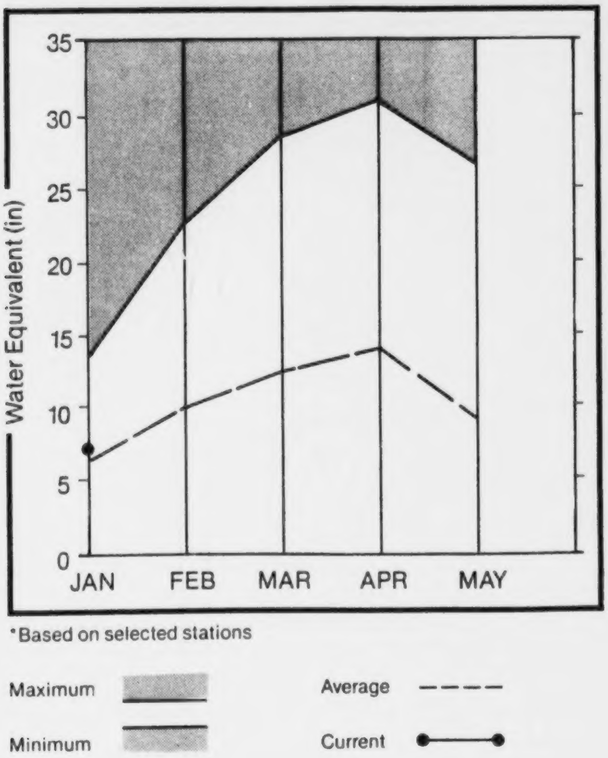
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Clackamas River	2	49	129
McKenzie River	2	40	70
Row River	0	0	0
Santiam River	5	72	134
Willamette; Middle Fork	3	49	107

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

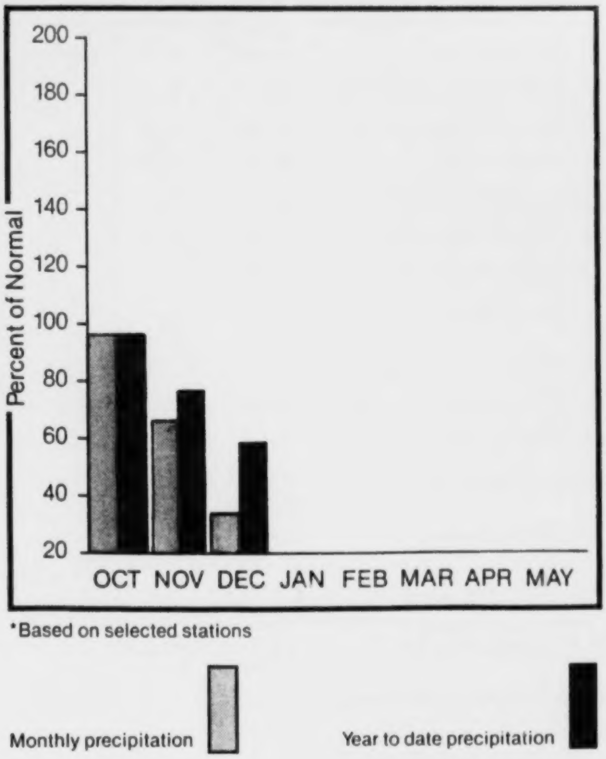
Rogue and Umpqua Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflow forecasts range from 81% to 110% with most being very close to normal. The snowpack is the lowest in the state but is still 97% of average. December precipitation has also been one of the lowest at 34% of normal. For the water year to date, the precipitation has been 73%. Reservoir storage is normal for this time of year.

For more information contact your local Soil Conservation Service office.

ROGUE AND UMPQUA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
APPLEGATE nr Copper *	APR-SEP	123.4	**113.5**	**91.0**	137.0	47.0				
SF BIG BUTTE CK near Butte Falls	APR-JUL	34.4	**34.3**	**99.0**	139.5	61.0				
CLEARWATER above Trap Creek *	APR-SEP	68.5	**64.9**	**94.0**	119.7	70.1				
COW CREEK near Azalea	FEB-JUL	42.7	**35.0**	**81.0**	107.7	56.2				
FOURMILE LAKE net Inflow *	APR-JUL	3.9	**3.9**	**100.0**	153.8	51.3				
GRAVE CREEK at Pease Bridge	FEB-JUL	21.0	**20.0**	**95.0**	138.1	52.4				
HYATT PRAIRIE RES net Inflow *	APR-JUL	4.7	**4.2**	**90.0**	148.9	42.6				
ILLINOIS near Kerby	APR-JUL	179.6	**197.3**	**110.0**	159.8	60.1				
	APR-SEP	186.7	**205.0**	**109.0**	167.6	52.0				
NF LITTLE BUTTE CK nr Lakecreek *	APR-SEP	13.2	**12.3**	**93.0**	136.4	53.0				
SF LITTLE BUTTE CK nr Lakecreek *	APR-SEP	32.1	**29.8**	**92.0**	134.0	53.0				
RED BLANKET CK nr Prospect	APR-JUL	33.9	**34.0**	**100.0**	129.8	70.8				
ROGUE RIVER ab Prospect	APR-JUL	244.9	**230.0**	**93.0**	129.8	58.0				
	APR-SEP	299.5	**281.5**	**94.0**	123.9	64.1				
SF ROGUE near Prospect *	APR-JUL	58.9	**55.3**	**94.0**	123.9	64.5				
	APR-SEP	69.9	**65.7**	**94.0**	124.5	64.4				
ROGUE RIVER at Raygold *	APR-JUL	721.9	**721.9**	**100.0**	135.1	65.0				
	APR-SEP	879.9	**879.9**	**100.0**	135.0	65.0				
ROGUE RIVER at Grants Pass *	APR-JUL	732.9	**667.0**	**91.0**	126.1	55.9				
	APR-SEP	875.8	**797.0**	**91.0**	126.1	55.9				
SUCKER CREEK blw Little Grayback	APR-JUL	55.6	**55.2**	**99.0**	143.9	54.0				
NORTH UMPQUA nr Tokatee Falls *	APR-SEP	163.9	**163.0**	**99.0**	124.5	74.4				
NORTH UMPQUA at Winchester *	APR-JUL	751.1	**793.9**	**105.0**	130.7	80.7				
SOUTH UMPQUA at Brockway	APR-JUL	376.6	**369.0**	**97.0**	122.9	73.0				
SOUTH UMPQUA near Tiller	APR-JUL	180.3	**177.1**	**98.0**	123.1	73.2				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
APPLEGATE	75.2	**5.8**	16.3	---
EMIGRANT LAKE	39.0	**16.8**	17.7	18.3
FISH LAKE	8.0	**4.7**	5.5	5.3
FOURMILE LAKE	16.1	**9.3**	13.3	7.7
HOWARD PRAIRIE	60.0	**42.0**	52.6	38.0
HYATT PRAIRIE	16.1	**10.2**	12.8	10.0
LOST CREEK	315.0	**142.3**	283.3	---

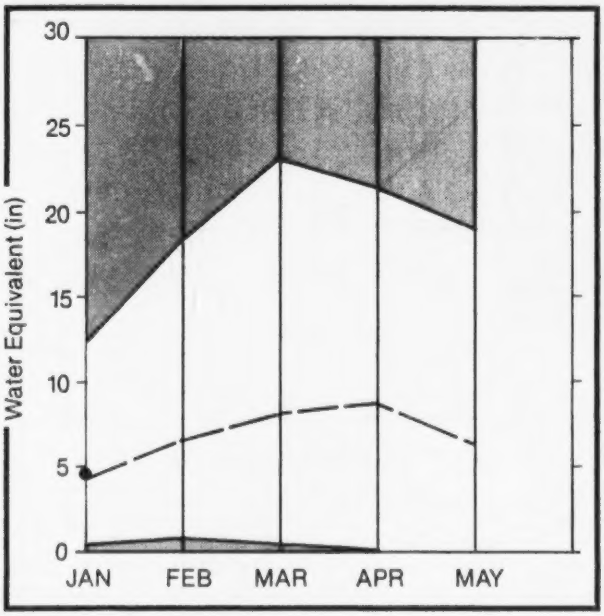
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Applegate River	2	39	**93**
Bear Creek	2	43	**100**
Butte Creek	6	55	**114**
Illinois River	1	41	**107**
North Umpqua River	9	62	**121**
Rogue River	21	46	**98**
Mt. Ashland	1	38	**96**

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

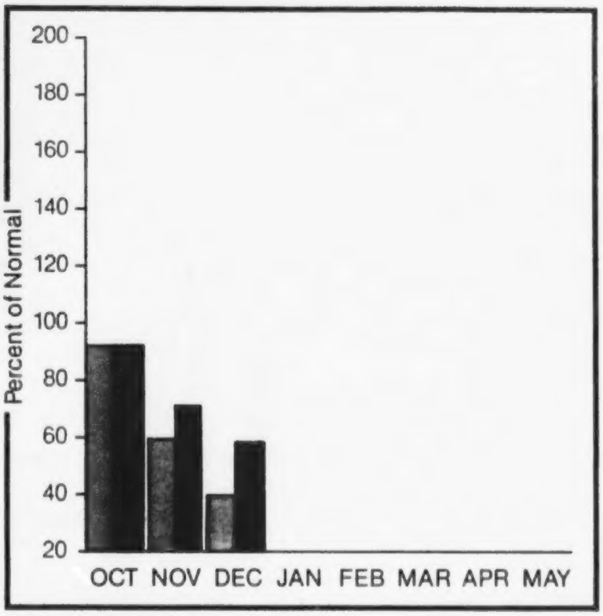
Klamath Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be near normal this spring and summer. Streamflows should range from 86% to 100% of average. Precipitation has been very low at 40% of normal for December and 58% for the October-December period. The mountain snowpack is currently 113% of normal. Gerber and Clear Lake storage is above average while Upper Klamath Lake is 91% of average.

For more information contact your local Soil Conservation Service office.

KLAMATH BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLEAR LAKE net Inflow	FEB-JUL	88.0	83.5	94.0	144.3	44.3				
GERBER RESERVOIR net Inflow	FEB-JUL	38.4	38.4	100.0	151.0	49.5				
SPRAGUE near Chiloquin	FEB-SEP	324.4	260.0	80.0	122.1	38.2				
	APR-SEP	227.7	182.0	79.0	131.8	28.1				
UPPER KLAMATH LAKE net Inflow	FEB-SEP	840.6	815.0	96.0	131.9	62.0				
	APR-SEP	502.3	487.0	96.0	143.9	50.0				
WILLIAMSON near Chiloquin	FEB-SEP	565.7	492.0	86.0	122.0	52.0				
	APR-SEP	386.8	340.0	87.0	129.8	46.0				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (CALIF)	513.3	297.7	361.7	179.8
GERBER	94.3	53.1	69.2	37.8
UPPER KLAMATH LAKE	523.7	309.4	289.0	338.9

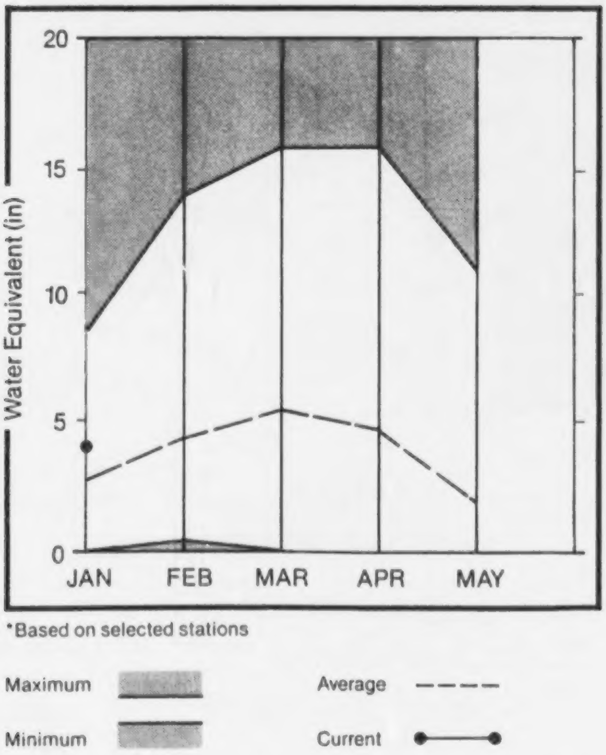
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Lost River	2	48	72
Sprague River	2	105	133
Upper Klamath Lake	12	57	111
Williamson River	5	51	96

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

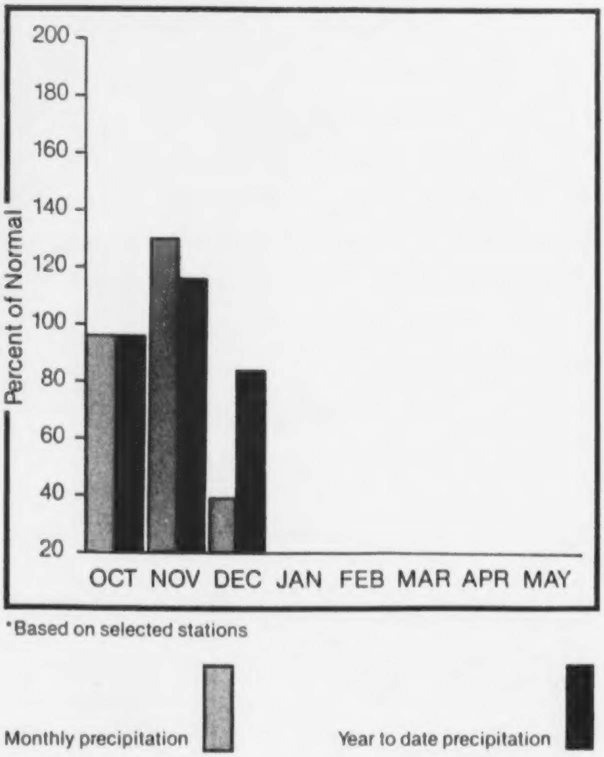
Lake County and Goose Lake Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Lake County`s water supplies should be good this year with near normal amounts being available. The streamflow forecasts range from 90% to 107% of average. The snowpack is 113% of average. Precipitation during the month of December has been 39% of normal while for the water year to date it has been 82%. Stored water supplies are near normal.

For more information contact your local Soil Conservation Service office.

LAKE COUNTY AND GOOSE LAKE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BRIDGE CREEK at Spahr Ranch	APR-JUL	3.4	3.6	107.0	147.1	58.8				
CHEWAUCAN near Paisley	MAR-JUL	82.4	74.1	90.0	135.9	43.7				
COTTONWOOD CK near Lakeview *	MAR-JUL	10.9	10.6	97.0	165.1	36.7				
DEEP CREEK ab Adel	MAR-JUL	76.2	76.2	100.0	154.9	44.6				
DREWS RESERVOIR net Inflow *	MAR-JUL	39.5	40.6	103.0	167.1	38.0				
HONEY CREEK near Plush	MAR-JUL	18.9	19.8	105.0	164.0	47.6				
SILVER CREEK near Silver Lake *	APR-JUL	14.1	13.3	94.3	148.9	42.6				
TWENTYMILE near Adel	MAR-JUL	26.0	27.3	105.0	188.5	19.2				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COTTONWOOD	8.7	3.9	1.5	2.1
DREWS	63.0	25.7	44.9	28.6
THOMPSON VALLEY	18.4	NO REPORT		9.6

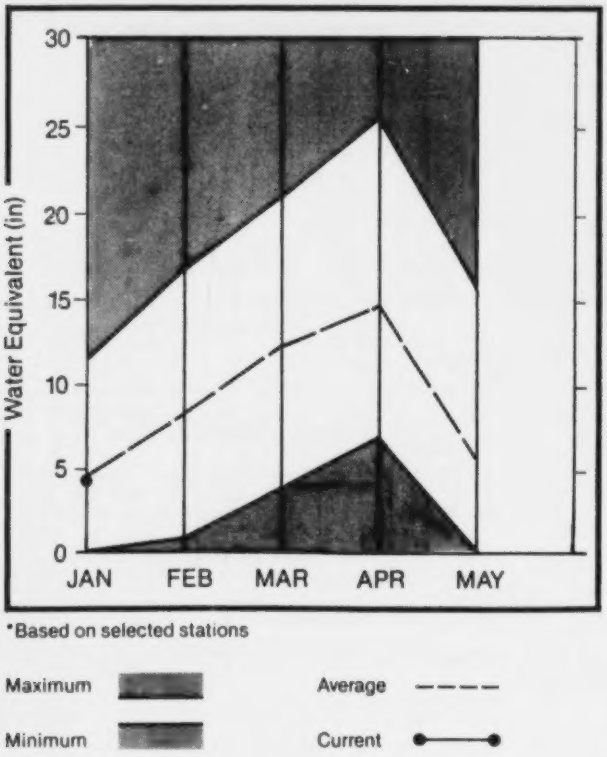
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Chewaucan River	1	120	150
Deep Creek	2	63	132
Drew Creek	1	120	150
Honey Creek	2	63	132
Silver Creek (Lake Co.)	2	113	194
Twentymile Creek	2	63	132

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

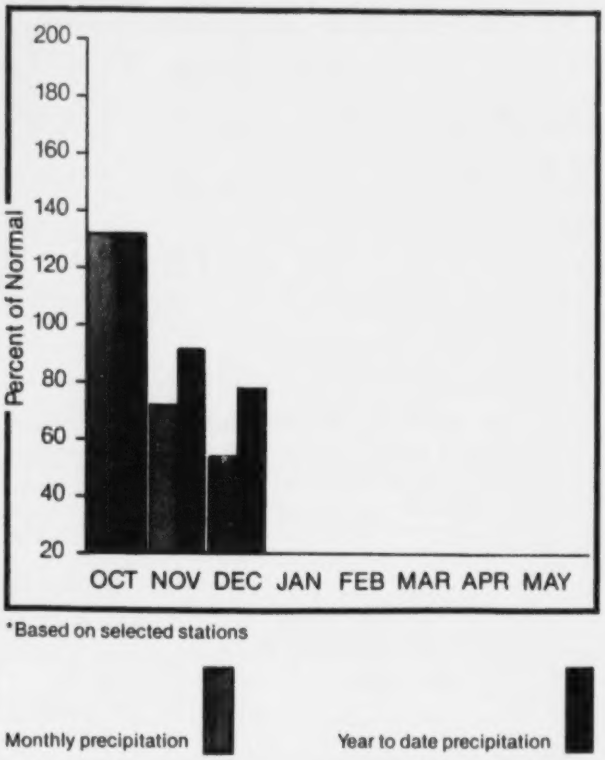
Harney Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be near normal this year in the Harney basin. The forecasts range from 91% to 110% of normal. December precipitation was half the normal amount while for the October-December period it has been 78% of normal. The snowpack is very good at 136% of normal. The very cold temperatures during November and early December helped the snowpack be this heavy.

For more information contact your local Soil Conservation Service office.

HARNEY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
DONNER UND BLITZEN nr Frenchglen	MAR-JUL	61.8	68.0	110.0	160.2	59.9				
	APR-SEP	58.9	64.7	110.0	159.6	59.4				
SILVER CREEK near Riley	APR-JUL	15.5	17.0	109.0	193.5	25.8				
SILVIES near Burns	MAR-JUL	96.6	96.6	100.0	160.5	40.4				
	APR-SEP	76.9	76.9	100.0	159.9	40.3				
TROUT CREEK nr Denio	MAR-JUL	9.3	8.6	91.0	150.5	32.3				
	APR-SEP	8.8	8.2	93.0	159.1	34.1				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Donner und Blitzen River	3	99	162
Silver Creek (Harney Co)	2	60	98
Silvies River	6	62	105
Trout Creek	1	123	137

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Forecast Date of Low Flow Values

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value'
Area 1			
Owyhee near Rome	2000	May 16	May 14
	1000	May 30	May 28
	500	June 13	June 11
Area 2			
Eagle Cr.abv.Skull Cr.	225	July 26	July 25
	160	Aug 2	Aug. 5
Catherine Cr.nr.Union	49	Aug. 1	Avg.value 49
	100	July 7	July 9
	50	July 26	July 28
Powder near Sumpter	100	June 23	June 25
	20	July 19	July 22
Deer Cr. abv. Phillips Res. nr. Sumpter	40	June 17	June 17
	10	July 4	July 6
Area 3			
Umatilla at Pendleton	550	May 17	May 17
So. Fk. Walla Walla near Milton	200	June 5	June 9
	103	Aug.-Sept Min.flow	Avg.value 105
Area 4			
John Day at Service Cr.	195	Aug. 1	Avg.value 212
Area 5			
Crane Prairie net Inflow	434	Peak	
	261	Oct. 31	
	Peak	May 22	
Crooked R. near Post	100	May 26	June 1
Deschutes below Bend	1500	not forecast	July 1
Little Deschutes nr. La Pine	400	June 3	June 7
	200	July 4	July 8
Squaw Cr. nr. Sisters	100	Aug 10	Aug. 16
Tumalo Cr. nr. Bend	235	June 24	June 23
	207	June 26	June 25
	150	July 6	July 5
	71	Aug 8	Aug. 7

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Area 6			
Clear Branch Inflow	* 40	July 15-31	**39
*Average cfs forecast to flow for this two-week period.			
**Average cfs for period of record.			
White blw. Tygh Valley	200	July 3	July 3
	145	Aug. 1	Avg.value 145
Area 9			
Cow Creek nr. Azalea	20	July 2	July 4
	10	Aug 17	Aug. 19
Little Butte Creek, South Fork	100	May 13	May 15
South Umpqua nr.Brockway	90	July 29	July 30
South Umpqua at Tiller	140	July 9	July 10
	90	July 29	July 30
	60	Aug 25	Aug. 27
Area 11			
Deep Cr. above Adel	100	June 21	June 21
Honey Cr. nr. Plush	100	May 16	May 15
	50	May 31	May 30
Twentymile near Adel	50	June 3	June 2
	10	July 4	July 3
Area 12			
Silvies nr. Burns	400	May 5	May 5
	200	May 21	May 21
	100	June 9	June 9
	50	June 22	June 23
Donner und Blitzen	200	June 17	June 15
	100	July 7	July 5
	GAGE HEIGHT	SURFACE ACRES	AVERAGE SURFACE ACRES
Malheur Lake at Break in Cole Island Dike near Voltage			
July 1	4101.2	114,600	40,000
Aug. 1	4100.8	111,400	33,000

HISTORICAL DATA (Columbia River at The Dalles)

Year	STREAMFLOW (1,000 AF)			REGULATED PEAK (1,000cfs)	DATE
	APR-SEP	APR-JUN	MAY-JUN		
1961	101,940	76,860	66,185	699	JUN 8
1962	95,260	66,516	50,819	460	JUN 5
1963	87,860	58,499	47,812	437	JUN 18
1964	110,422	73,512	63,670	662	JUN 18
1965	114,222	80,098	62,467	520	JUN 9
1966	87,386	58,250	45,962	396	JUN 12
1967	109,319	74,378	66,452	622	JUN 10
1968	89,102	55,593	47,994	404	JUN 13
1969	112,377	85,742	63,899	515	MAY 15
1970	88,243	62,993	55,227	425	MAY 28
1971	126,898	91,781	76,453	557	MAY 13
1972	135,500	97,041	81,451	619	JUN 20
1973	65,549	43,765	36,565	221	DEC 5
1974	139,501	99,035	78,946	588	JUN 20
1975	108,906	73,018	62,861	422	MAY 17
1976	122,771	79,084	62,554	418	MAY 14
1977	54,108	35,505	28,394	213	JAN 25
1978	100,968	67,287	52,035	313	JUN 10
1979	76,700	54,900	44,984	311	MAY 25
1980	91,631	68,229	53,704	345	JUN 18
1961-80 AVG	100,933	70,104	57,422	457	

LOWER COLUMBIA RIVER FLOOD STAGES (With 9.5' Tide at Astoria)

VANCOUVER GAGE (NWS)	FLOW AT THE DALLES (1,000 cfs)	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State

- Oregon Department of Water Resources
- Oregon State University
- Soil and Water Conservation Districts of Oregon

Federal

- U.S. Department of Agriculture
    - Extension Service
    - Forest Service
- U.S. Department of Army
    - Corps of Engineers
- U.S. Department of Commerce
    - NOAA, National Weather Service
- U.S. Department of Energy
    - Bonneville Power Administration
- U.S. Department of the Interior
    - Bureau of Land Management
    - Bureau of Reclamation
    - Fish and Wildlife Service
    - Geological Survey

Local

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- City of Baker
- City of La Grande
- City of Portland
- City of The Dalles
- City of Walla Walla
- Douglas County Water Resources Survey
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control – Owyhee Project
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control – Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale – Oregon Irrigation District
- Warmsprings Irrigation District

Private

- Pacific Power and Light Company
- Portland General Electric Company
- The Crag Rats, Hood River, Oregon

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Oregon Water Supply Outlook

and

Federal – State – Private Cooperative Snow Surveys

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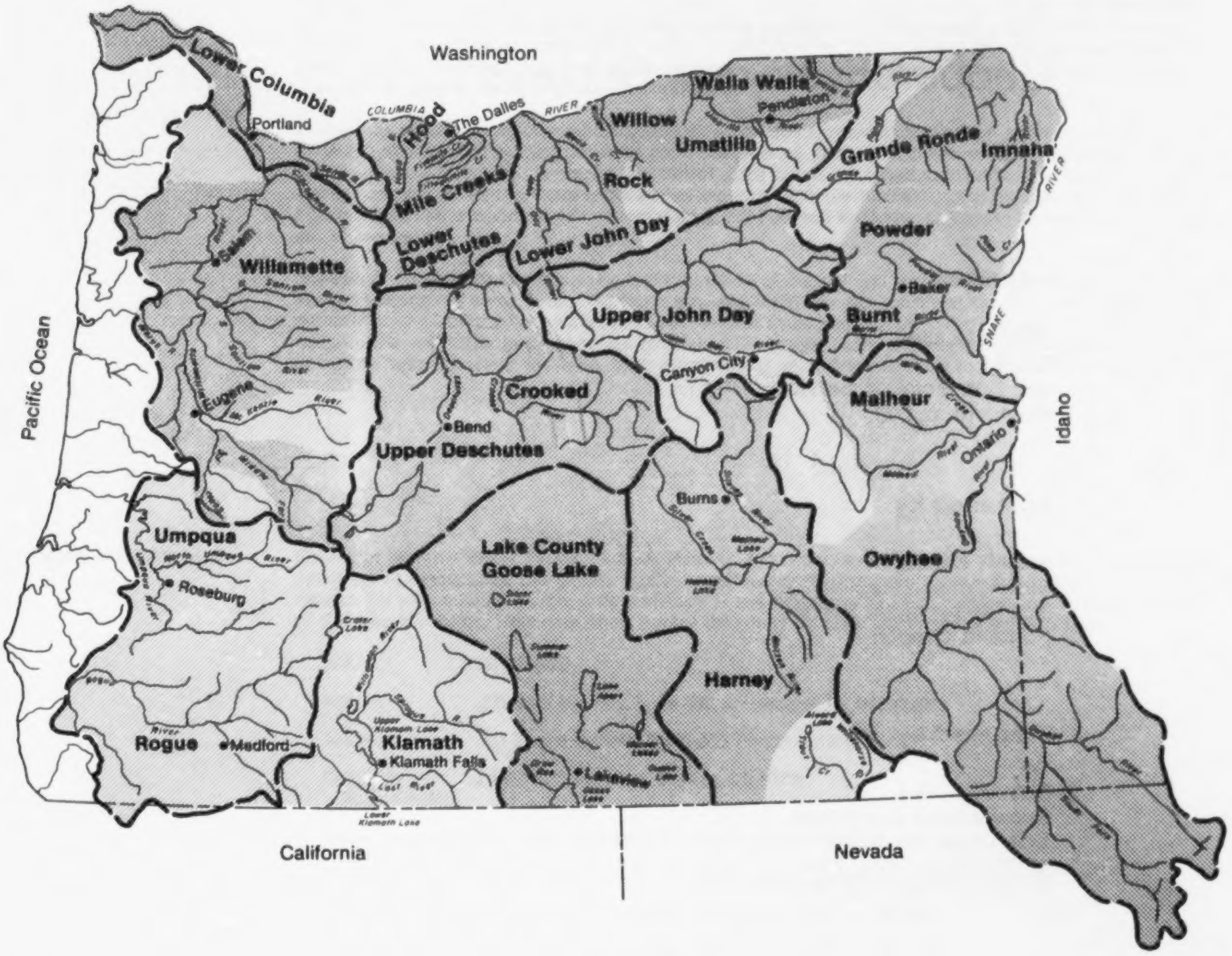
Programs and assistance of the United States Department of Agriculture are available without regard to race, creed, color, sex, age, or national origin.

Streamflow Prospects for Oregon

Spring and Summer Period



Streamflow Prospects

▨	Much above average:	(>130%)
▨	Above average:	(110-130%)
▨	Near average:	(90-110%)
▨	Below average:	(70-90%)
▨	Much below average:	(<70%)
☐	Not forecast	

GENERAL OUTLOOK

SUMMARY:

STREAMFLOW IS FORECAST TO BE BELOW NORMAL TO NEAR NORMAL THIS SPRING AND SUMMER. BELOW NORMAL PRECIPITATION WAS REPORTED FOR THE MONTH OF JANUARY AND FOR THE WATER YEAR TO DATE. IRRIGATION RESERVOIR STORAGE IS 112% OF THE FEBRUARY 1 NORMAL.

SNOWPACK:

The west side of the Cascades has a below normal snowpack. The east side of the Cascades, the Mt. Hood area, and most of eastern Oregon has a near normal snowpack. The exceptions to this are the below normal snowpack in Lake County , Umatilla, and Walla Walla watersheds. Warm temperature during January and some occurrence of rain at higher elevations caused the snowpack to lose some water equivalent.

PRECIPITATION:

January's precipitation was generally below average across Oregon. The exception is near normal amounts in the following areas: Willamette Valley, Upper Deschutes and Crooked River watersheds, and Klamath County. Precipitation for the water year to date [Oct-Jan] has been below average except for much below average amounts in Klamath County and the Rogue River/Umpqua River watersheds.

RESERVOIRS:

Twenty-six principal irrigation reservoirs currently contain 2,066,900 acre feet of stored water. This is 65% of capacity and 112% of the February 1 average.

STREAMFLOW:

Generally streamflow during January was much below normal west of the Cascades and near normal east of the mountains. Southeastern Oregon had below normal streamflows for the month.
Prospective streamflow as a percent of average on representative Oregon streams is as follows:

STREAM	PERIOD	% OF AVERAGE
OWYHEE NET INFLOW	FEB-JUL	105%
GRANDE RONDE AT LAGRANDE	APR-SEP	85%
UMATILLA AT PENDLETON	MAR-SEP	92%
DESCHUTES AT BENHAM FALLS	APR-SEP	95%
WILLAMETTE MF NR OAKRIDGE	APR-SEP	95%
ROGUE AT RAYGOLD	APR-SEP	95%
UPP. KLAMATH LK NET INFLOW	APR-SEP	88%
SILVIES NEAR BURNS	MAR-JUL	92%

Malheur Lake in Harney County is expected to continue to rise. The July 1 level is forecast to be 4101.20 feet with a surface of 114,600 acres. Last year, the July 1 elevation was 4101.87 feet. It had peaked on May 1, 1985 at 4102.45 feet. The normal surface of this lake on July 1 is 40,000 acres.

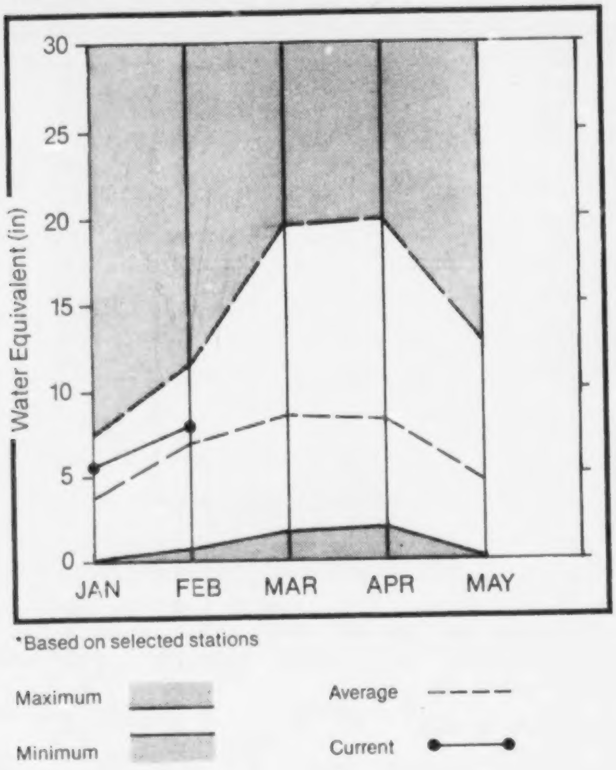
These forecasts assume normal weather conditions will occur throughout the forecast period.

The forecasts in this bulletin are a result of coordinated activity between the Soil Conservation Service and the National Weather Service in an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA, National Weather Service and other cooperators.

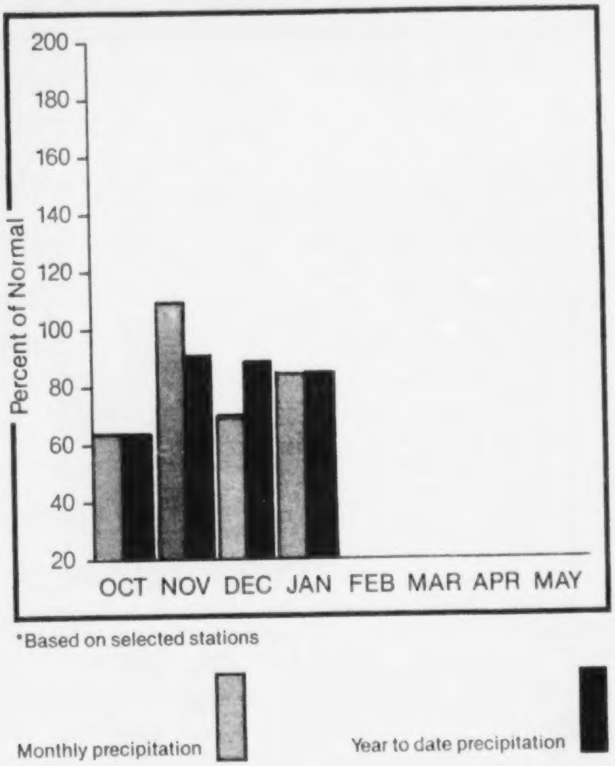
Owyhee and Malheur Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Summer streamflow is forecast to be near normal. Mountain snowpack is near to above normal and is the highest in the state. Precipitation was 85% of normal during January and 86% for the Oct-Jan period. Reservoir storage is good with Beulah and Owyhee above average for February 1.

For more information contact your local Soil Conservation Service office.

OWYHEE AND MALHEUR BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BULLY CREEK at Warmsprings	MAR-MAY	14.4	12.7	88	174	30				
MALHEUR near Drewsey	FEB-JUL	106.3	96.7	90	140	42				
	APR-SEP	69.6	63.3	90	148	34				
MALHEUR, NORTH FORK at Beulah	FEB-JUL	78.9	72.6	92	132	52				
	APR-SEP	62.8	57.2	91	132	49				
OWYHEE RESERVOIR net Inflow	FEB-JUL	561.1	589.2	105	150	50				
	APR-SEP	376.1	395.0	105	150	50				
OWYHEE at Rome	FEB-JUL	597.9	627.8	105	150	50				
SUCCOR CREEK nr Jordan Valley	FEB-JUL	16.2	16.8	103	154	56				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BEULAH RES	60.0	33.7	40.4	24.9
BULLY CREEK	30.0	10.6	17.6	14.5
OWYHEE	715.0	470.0	579.6	443.9
WARMSPRINGS	191.0	63.6	136.9	83.0

WATERSHED SNOWPACK ANALYSIS

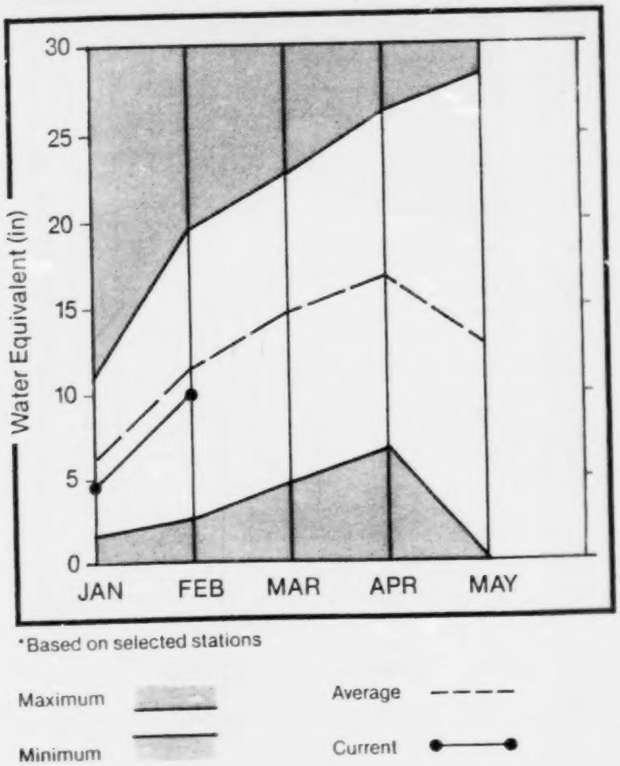
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Owyhee River	10	94	116
Malheur	5	93	107
Jordan Creek	0	0	0
Bully Creek	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

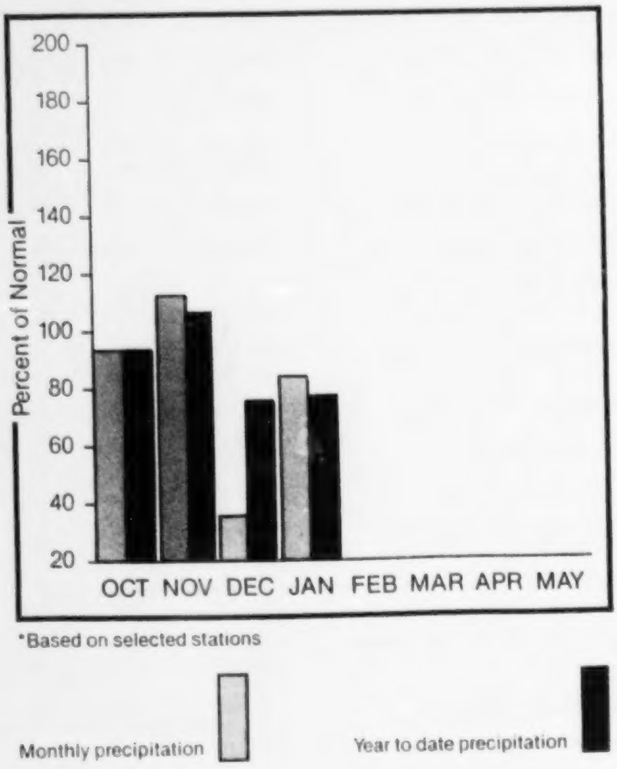
Burnt, Powder, Grande Ronde, and Imnaha Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be near normal this summer. The snowpack is also near normal in the mountains of northeastern Oregon. January's precipitation was 84% of average while for the winter season it has been 78%. Reservoir storage is very good in the area. Streams should recede a few days earlier than normal this summer.

For more information contact your local Soil Conservation Service office.

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
ANTHONY CREEK blw NF nr Powder	FEB-JUL	17.3	**17.9**	**103**	139	69				
BEAR CREEK near Wallowa	APR-SEP	65.6	**60.2**	**91**	116	67				
BIG CREEK blw Burn Ck	FEB-JUL	12.5	**12.2**	**97**	128	64				
BURNT near Hereford	FEB-JUL	48.1	**48.1**	**99**	143	56				
	APR-SEP	34.3	**34.3**	**100**	140	61				
CATHERINE CK near Union	APR-SEP	63.7	**60.5**	**94**	119	71				
DEER CK near Sumpter	FEB-JUL	18.4	**17.1**	**92**	141	43				
EAGLE CK above Skull Ck	APR-JUL	168.9	**162.1**	**95**	120	72				
	APR-SEP	184.2	**176.9**	**96**	146	46				
GRANDE RONDE at La Grande	MAR-JUL	197.6	**171.9**	**86**	129	45				
	APR-SEP	161.9	**137.6**	**84**	127	43				
HURRICANE CK near Joeseph	APR-SEP	45.8	**43.5**	**94**	116	74				
IMNAHA at Imnaha	APR-SEP	300.7	**285.7**	**95**	127	63				
LOSTINE near Lostine	APR-SEP	122.9	**110.6**	**89**	111	69				
PINE CREEK near Oxbow	FEB-JUL	238.3	**221.6**	**92**	143	43				
POWDER near Sumpter	APR-JUL	55.7	**52.9**	**94**	131	59				
	APR-SEP	56.8	**54.0**	**95**	130	60				
EAST FORK WALLOWA near Joseph	FEB-SEP	12.4	**12.0**	**96**	113	81				
	APR-SEP	11.1	**10.7**	**96**	126	72				
WALLOWA at Joseph	APR-JUL	71.6	**71.6**	**99**	149	50				
WOLF CK RESERVOIR net Inflow	MAR-JUN	13.7	**14.5**	**105**	153	58				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
PHILLIPS LAKE	73.5	**40.0**	59.7	29.1
THIEF VALLEY	17.4	**17.9**	16.5	15.6
UNITY	25.2	**14.1**	15.6	11.9
WALLOWA LAKE	37.5	**27.1**	14.2	20.5
WOLF CREEK	10.4	**2.7**	4.4	---

WATERSHED SNOWPACK ANALYSIS

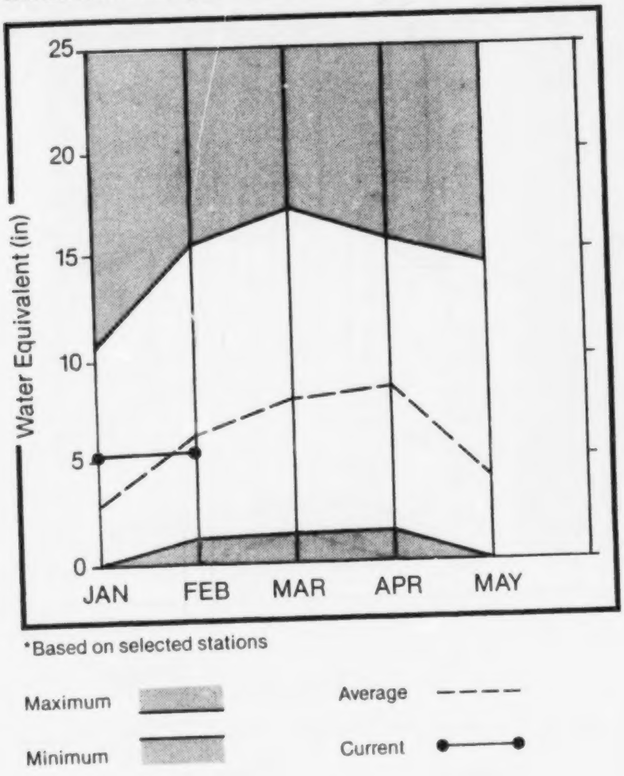
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Grande Ronde ab LaGrande	5	76	**87**
Powder River	7	91	**98**
Wallowa,Imnaha,Catherine	3	84	**93**
Burnt River	4	89	**97**

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

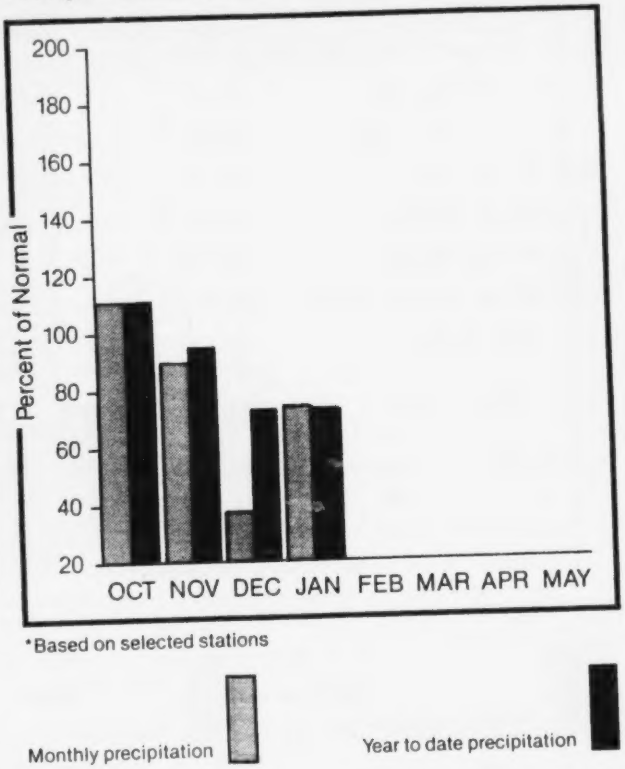
Umatilla, Walla Walla, Willow, Rock, and Lower John Day Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be below to near normal this summer. Mountain snowpack is below average. Precipitation during January was 74% of average. For the winter period from October through January, the valley precipitation has been 72% of normal. Reservoir storage is below the February 1 normal. Summer streamflow will recede a few days earlier than normal.

For more information contact your local Soil Conservation Service office.

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BUTTER CK NEAR PINE CITY	MAR-JUL	11.6	10.7	92	147	43				
COUSE CK nr Milton Freewater	FEB-JUL	6.8	5.8	85	132	29				
MCKAY near Pilot Rock	APR-SEP	23.8	20.6	86	151	25				
PINE CREEK near Weston	FEB-SEP	5.6	4.6	82	125	36				
RHEA CREEK near Heppner	FEB-JUL	9.3	7.6	81	129	32				
ROCK CREEK above Cayuse Canyon	FEB-JUL	19.8	20.3	102	152	51				
UMATILLA near Gibbon	MAR-SEP	98.6	90.7	91	129	55				
	APR-SEP	76.7	70.6	92	129	55				
UMATILLA near Pendleton	MAR-SEP	203.8	187.5	92	134	50				
	APR-SEP	146.9	135.2	92	142	42				
SF WALLA WALLA nr MiltonFreewater	MAR-SEP	80.3	72.3	90	115	66				
	APR-SEP	67.4	60.0	89	111	67				
WILLOW CREEK near Heppner	FEB-JUL	9.4	9.3	98	149	53				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COLD SPRINGS	50.0	9.0	17.3	28.2
MCKAY	73.8	27.8	34.7	31.8

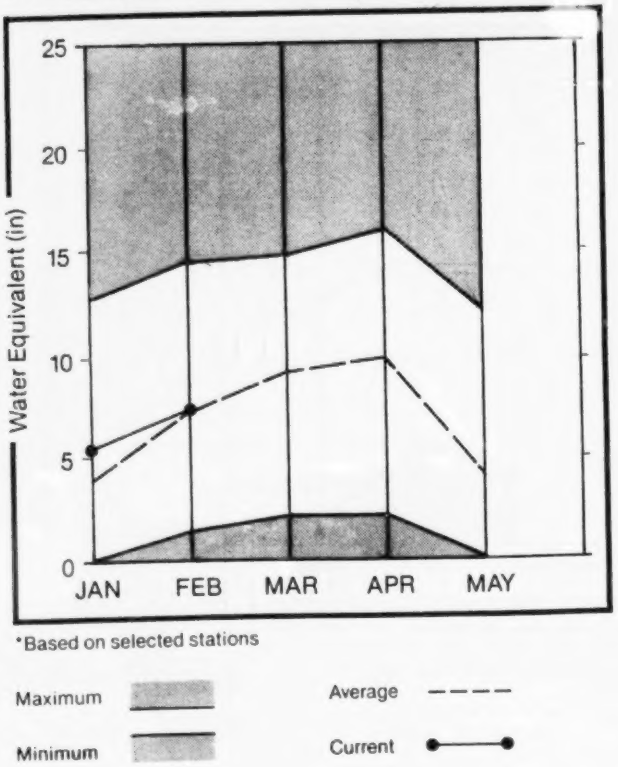
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Walla Walla River	0	0	0
Umatilla River	3	57	81
McKay Creek	3	57	81

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

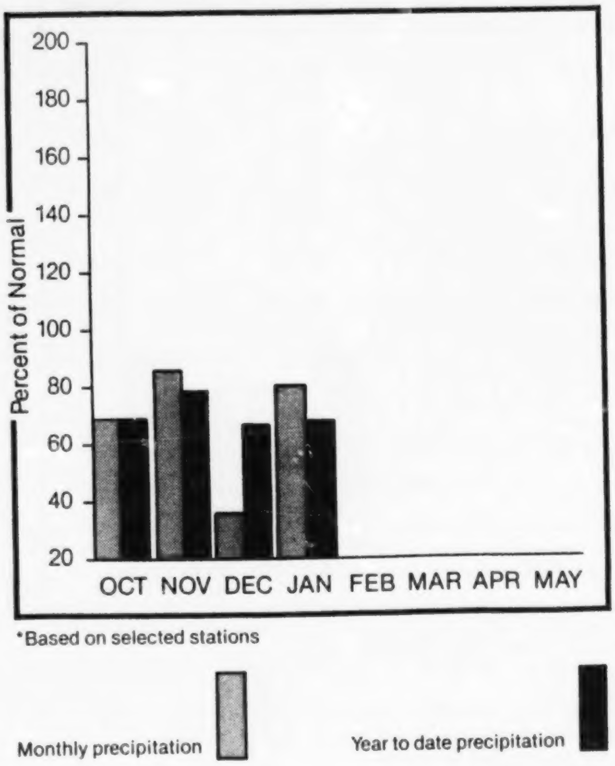
See Pages 30-31 for Forecast Date of Low Flow Values.

Upper John Day Basin



Mountain snowpack* (inches)

*Based on selected stations



Precipitation* (percent of normal)

*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies will be near normal this spring and summer in the John Day basin. Mountain snowpack was near normal on the first of February. January precipitation was 80% of normal while for the October through January period it has been 69%. Streamflows should recede a few days early this summer.

For more information contact your local Soil Conservation Service office.

UPPER JOHN DAY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CAMAS CREEK nr Ukiah	MAR-JUL	43.5	41.3	94	140	51				
	APR-SEP	34.2	32.5	95	140	50				
NF JOHN DAY at Ritter	MAR-JUL	133.0	130.3	97	138	58				
	APR-SEP	112.0	109.8	98	135	61				
NF JOHN DAY at Monument	MAR-JUL	658.3	592.5	90	131	49				
	APR-SEP	549.4	494.5	90	132	48				
MOUNTAIN CREEK near Mitchell	FEB-JUL	5.1	4.4	86	137	39				
STRAWBERRY CREEK nr Prairie City	MAR-JUL	7.3	6.3	86	123	55				
	APR-SEP	7.8	6.6	84	115	51				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

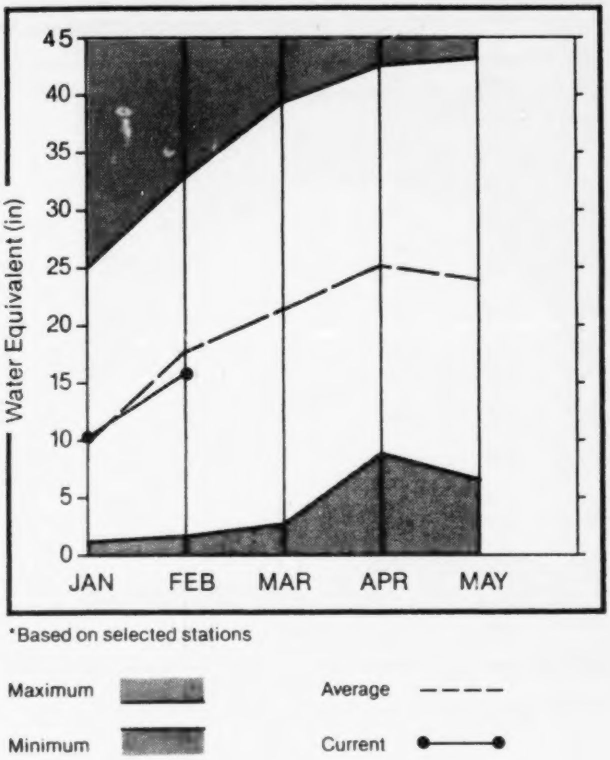
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
John Day, North Fork	7	84	88
John Day above Dayville	11	83	93

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

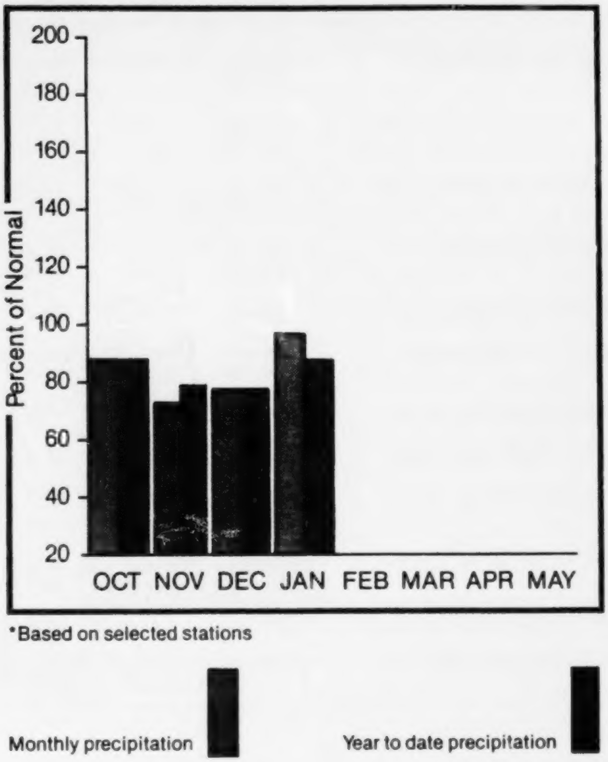
Upper Deschutes and Crooked Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be near normal this spring and summer. The mountain snowpack is above average in the Crooked and Ochoco watersheds. The snowpack is below average in the Deschutes and Little Deschutes drainages while the Tumalo and Squaw Creeks area has 107%. January's precipitation was one of the highest in the state (97% of average). For the October-January period, it has been 80%. Reservoir storage is above the February 1 normal. Summer streamflows should recede a few days early this year.

For more information contact your local Soil Conservation Service office.

UPPER DESCHUTES AND CROOKED BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BEAVER CREEK nr Paulina	FEB-JUL	40.9	40.9	100	149	49				
	APR-SEP	16.8	16.8	100	149	48				
CRANE PRAIRIE RES net Inflow	FEB-JUL	98.8	98.8	100	137	63				
	APR-SEP	113.2	113.2	100	137	63				
CRESCENT CK nr Crescent Lake	MAR-JUL	18.8	18.8	100	138	59				
	APR-SEP	19.9	19.9	100	141	60				
CROOKED nr Prineville	FEB-JUL	176.6	180.1	101	158	46				
	APR-SEP	93.9	95.8	102	158	46				
NF CROOKED blw Lookout Ck	FEB-JUL	14.9	14.2	95	148	47				
DESCHUTES at Benham Falls	APR-JUL	352.9	342.3	96	119	75				
	APR-SEP	539.9	512.9	94	120	70				
DESCHUTES below Snow Creek	FEB-SEP	71.3	71.3	100	135	65				
DESCHUTES Below Snow Creek	APR-SEP	59.3	59.3	100	138	61				
LITTLE DESCHUTES nr Lapine	FEB-JUL	95.5	87.8	91	130	54				
	APR-SEP	77.3	71.1	91	122	62				
OCHOCO RESERVOIR net Inflow	FEB-JUL	31.9	30.3	94	179	13				
	APR-SEP	17.7	16.8	94	175	11				
SQUAW CREEK nr Sisters	APR-SEP	47.7	48.2	101	126	75				
TUMALO CREEK near Bend	APR-SEP	44.3	44.3	100	120	79				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CRANE PRAIRE	55.3	45.2	35.7	4[illegible].6
CRESCENT LAKE	86.9	70.8	81.7	50.5
OCHOCO	47.5	23.6	27.4	20.5
PRINEVILLE	153.0	102.9	82.5	99.5
WICKIUP	200.0	194.2	174.4	153.0

WATERSHED SNOWPACK ANALYSIS

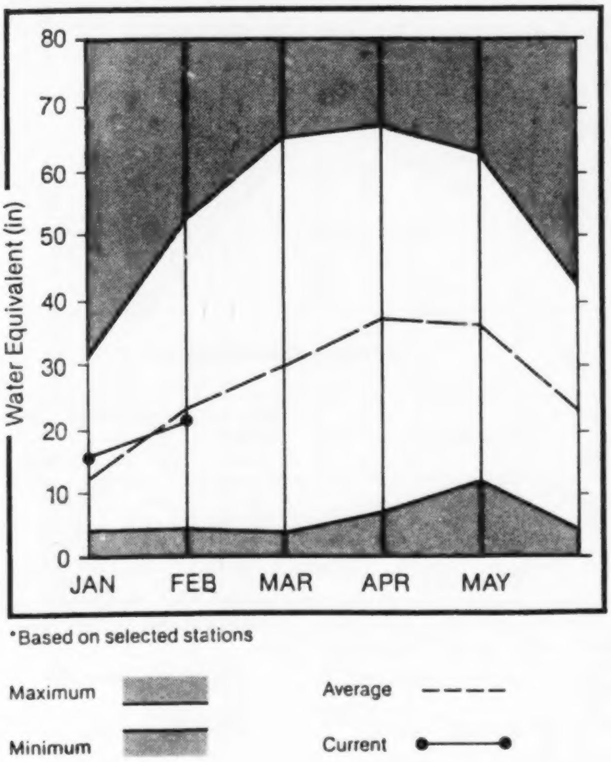
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Crooked, Ochoco	4	87	113
Deschutes above Wickiup	3	69	87
Little Deschutes	4	79	80
Tumalo and Squaw Creeks	5	87	107

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

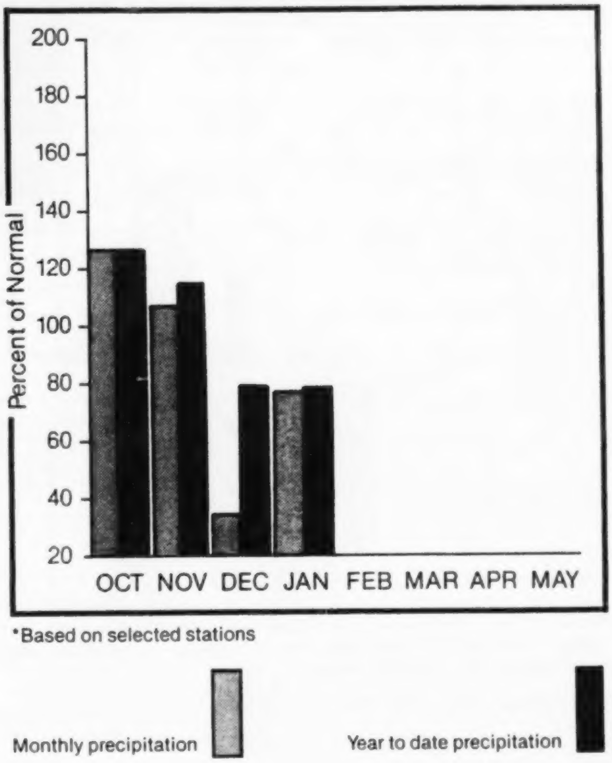
Hood, Mile Creeks, and Lower Deschutes Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be near normal this year. Streamflows should be 37% of normal for Hood River and 93% for the White River. An average snowpack was measured this month. January's precipitation was 77% of normal. For the water year to date [Oct-Jan], the precipitation has been 78%. Reservoir storage in the area is above normal for this time of year.

For more information contact your local Soil Conservation Service office.

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
HOOD RIVER near Tucker Bridge	APR-JUL	238.2	231.0	96	121	73				
	APR-SEP	285.3	273.9	96	120	72				
WEST FORK HOOD RIVER nr Dee	APR-JUL	124.9	121.2	97	124	70				
	APR-SEP	146.4	142.0	96	129	65				
WHITE RIVER below Tygh Valley	APR-JUL	112.5	104.6	92	127	59				
	APR-SEP	127.5	118.6	93	125	61				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (WASCO)	11.9	5.2	---	4.1

WATERSHED SNOWPACK ANALYSIS

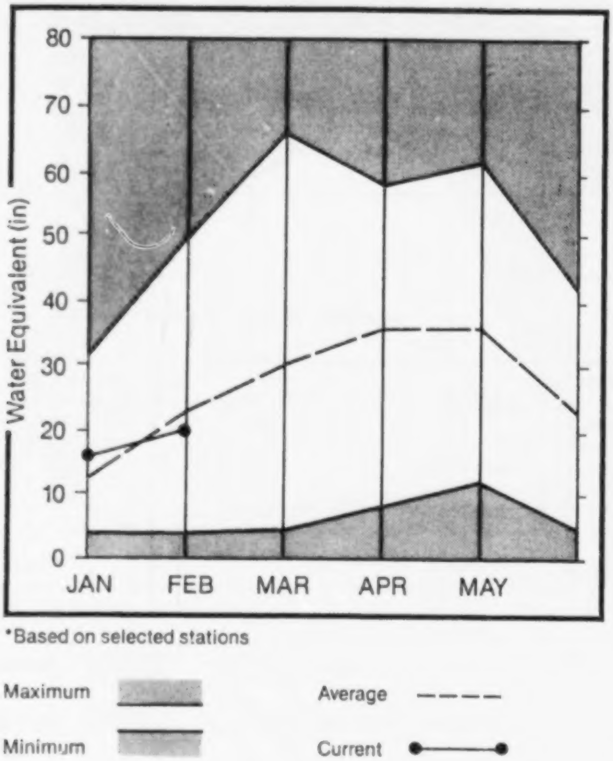
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Hood River	5	62	104
Mile Creeks	0	0	0
White River	3	60	93

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

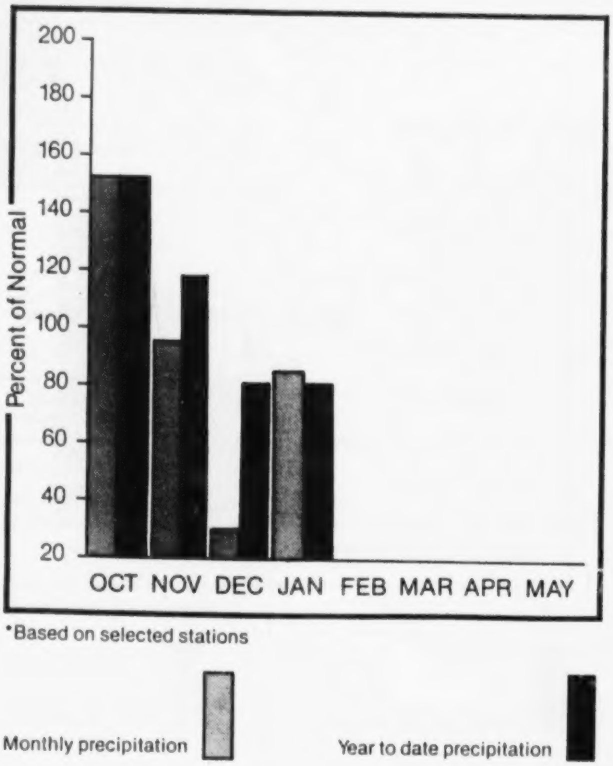
Lower Columbia Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be below normal for the Columbia River at The Dalles and near normal for the Sandy River. The snowpack for the Columbia basin above The Dalles is below normal. In the Mt. Hood area, the snowpack is near normal. Precipitation during January was 85% of normal while for the October through January period it has been 82%.

For more information contact your local Soil Conservation Service office.

LOWER COLUMBIA BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COLUMBIA at The Dalles	APR-JUL	86500.0	75716.0	88	108	68				
	APR-SEP	101000.0	88400.6	88	108	68				
SANDY RIVER near Marmot	APR-JUL	327.1	307.5	94	124	64				
	APR-SEP	380.8	358.4	94	124	64				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

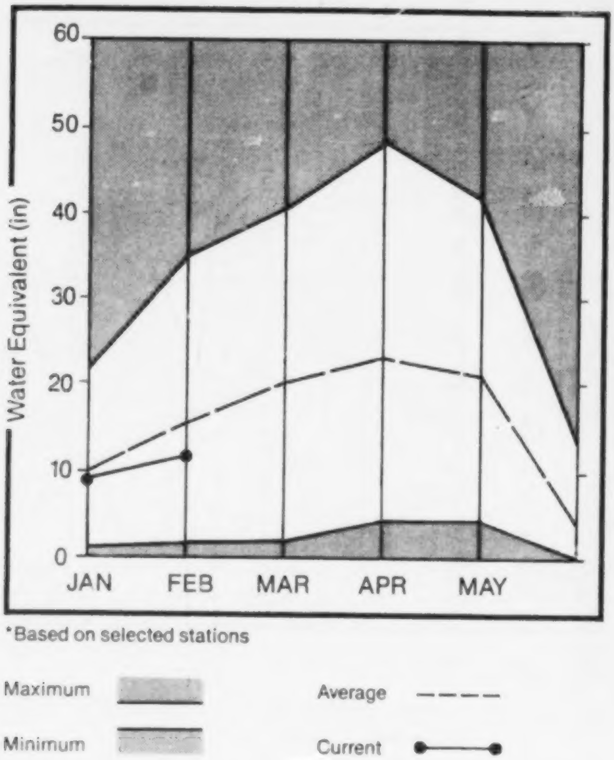
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Sandy River	3	60	93

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Page 29 for Historical Data and Flood Stages.

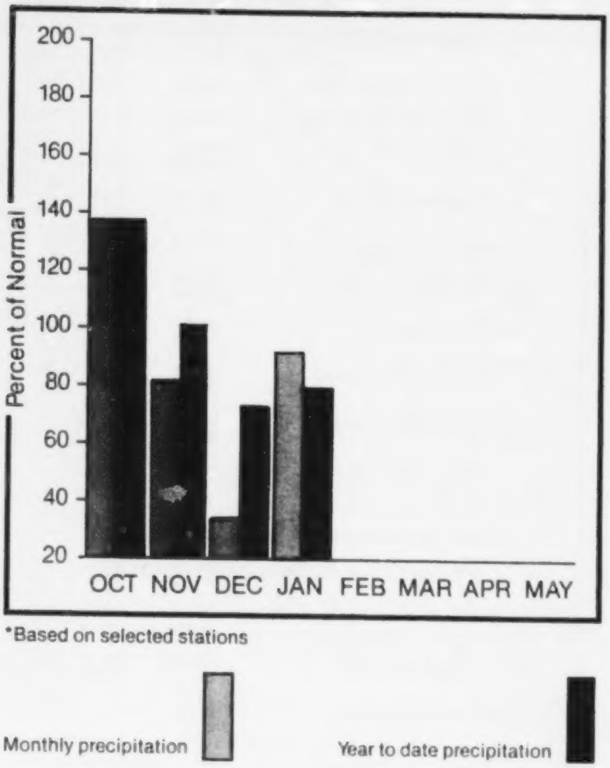
Willamette Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be near normal this spring and summer in the Willamette Valley. The McKenzie, Oak Grove River and Scoggins Creek should be below normal. The mountain snowpack is generally below average except in the Clackamas drainage where it is near average. January precipitation was 93% of normal while for the October-January period it has been 79%. The principal reservoirs are currently below average for this time of year.

For more information contact your local Soil Conservation Service office.

WILLAMETTE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLACKAMAS at Estacada	APR-JUL	652.0	[illegible]	[illegible]	122	74				
	APR-SEP	764.0	[illegible]	[illegible]	121	75				
CLACKAMAS above Three Lynx	APR-JUL	494.9	[illegible]	[illegible]	122	74				
	APR-SEP	587.3	[illegible]	[illegible]	121	75				
MCKENZIE AT McKenzie Bridge	APR-JUL	440.4	[illegible]	[illegible]	103	67				
MCKENZIE at McKenzie Bridge	APR-SEP	584.9	[illegible]	[illegible]	102	68				
MCKENZIE near Vida	APR-JUL	994.3	[illegible]	[illegible]	106	62				
	APR-SEP	1222.9	[illegible]	[illegible]	107	61				
SF MCKENZIE at Rainbow	APR-JUL	201.9	[illegible]	[illegible]	109	59				
	APR-SEP	228.9	[illegible]	[illegible]	106	62				
MOHAWK near Springfield	FEB-JUL	165.6	[illegible]	[illegible]	130	60				
OAK GROVE FORK ab Power Intake	APR-JUL	131.4	[illegible]	[illegible]	120	56				
	APR-SEP	167.3	[illegible]	[illegible]	115	61				
ROW near Dorena	APR-JUL	98.6	[illegible]	[illegible]	129	43				
	APR-SEP	104.4	[illegible]	[illegible]	131	41				
NORTH SANTIAM at Mehama	APR-JUL	731.2	[illegible]	[illegible]	126	68				
	APR-SEP	838.1	[illegible]	[illegible]	126	68				
SOUTH SANTIAM at Waterloo	APR-JUL	534.4	[illegible]	[illegible]	133	59				
	APR-SEP	577.7	[illegible]	[illegible]	135	57				
SCOGGINS CREEK near Gaston	FEB-JUL	44.8	[illegible]	[illegible]	125	45				
THOMAS CREEK nr Scio	FEB-JUL	158.8	[illegible]	[illegible]	137	57				
COAST FORK WILLAMETTE nr London	APR-JUL	27.8	[illegible]	[illegible]	129	61				
MF OF WILLAMETTE bl NF nr Oakridge	APR-JUL	667.9	[illegible]	[illegible]	117	73				
	APR-SEP	763.8	[illegible]	[illegible]	115	75				
NF OF MF OF WILLAMETTE nr Oakridge	APR-JUL	182.3	[illegible]	[illegible]	123	63				
	APR-SEP	203.9	[illegible]	[illegible]	120	66				
WILLAMETTE at Salem	APR-JUL	4171.1	[illegible]	[illegible]	132	60				
	APR-SEP	4655.0	[illegible]	[illegible]	129	63				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BLUE RIVER **	85.5	[illegible]	1.8	11.6
COTTAGE GROVE **	29.8	[illegible]	0.4	2.5
COUGAR **	155.2	[illegible]	5.8	22.1
DETROIT **	300.7	[illegible]	8.5	47.1
DORENA **	70.5	[illegible]	0.6	10.8
FALL CREEK **	115.5	[illegible]	1.3	10.8
FERN RIDGE **	109.6	[illegible]	6.7	18.8
FOSTER **	29.7	[illegible]	0.9	1.2
GREEN PETER **	268.2	[illegible]	6.2	41.3
HILLS CREEK **	200.2	[illegible]	8.2	33.0
LOOKOUT POINT **	337.0	[illegible]	9.4	47.5
TIMOTHY LAKE	61.7	[illegible]	46.0	50.5
HENRY HAGG LAKE	53.0	[illegible]	32.0	32.3

WATERSHED SNOWPACK ANALYSIS

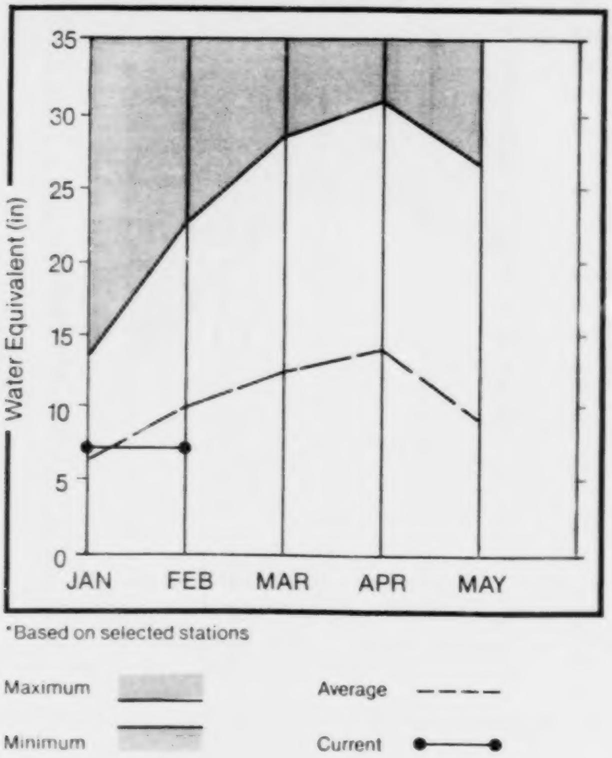
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Clackamas River	3	69	[illegible]
McKenzie River	3	57	[illegible]
Row River	0	0	[illegible]
Santiam River	4	78	[illegible]
Willamette, Middle Fork	4	67	[illegible]

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

**Multiple Purpose Reservoir...Space Reserved Primarily For Flood Control.

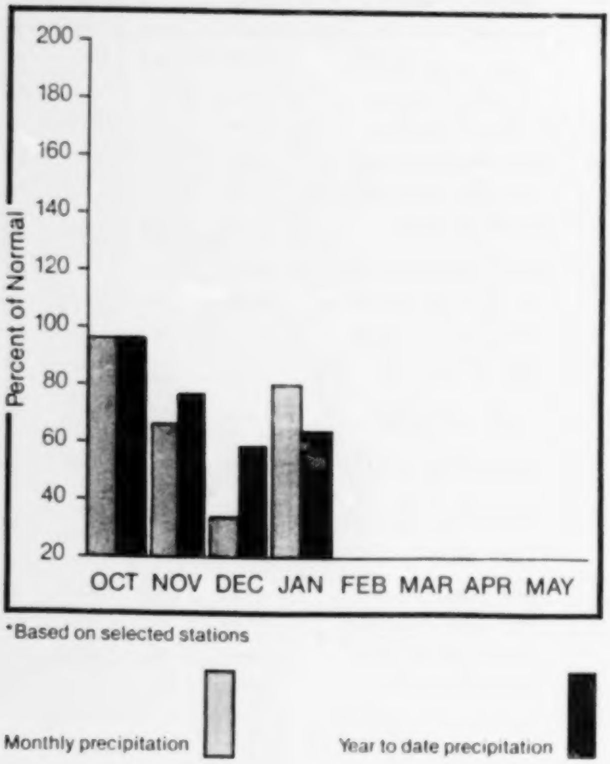
Rogue and Umpqua Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be below average this year. The mountain snowpack ranges from 49% of average on the Illinois River watershed to 99% on the Butte Creek watershed. Precipitation during January was 81% of normal. For the water year to date the Rogue/Umpqua drainages have had the lowest precipitation in the state (65% of normal). Irrigation reservoir storage currently is near normal for this time of year.

For more information contact your local Soil Conservation Service office.

ROGUE AND UMPQUA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
APPLEGATE nr Copper	APR-SEP	123.4	97.7	79	123	37				
SF BIG BUTTE CK near Butte Falls	APR-JUL	34.4	30.6	89	129	49				
CLEARWATER above Trap Creek	APR-SEP	68.5	58.9	86	105	67				
COW CREEK near Azalea	FEB-JUL	42.7	35.0	82	108	56				
FOURMILE LAKE net Inflow	APR-SEP	3.9	3.5	89	128	51				
GRAVE CREEK at Pease Bridge	FEB-JUL	21.0	18.1	86	133	43				
HYATT PRAIRIE RES net Inflow	APR-JUL	4.7	4.0	85	128	43				
ILLINOIS near Kerby	APR-JUL	179.6	158.1	88	138	38				
	APR-SEP	186.7	164.3	88	146	30				
NF LITTLE BUTTE CK nr Lakecreek	APR-SEP	13.2	11.4	86	121	53				
SF LITTLE BUTTE CK nr Lakecreek	APR-SEP	32.1	27.4	85	121	50				
RED BLANKET CK nr Prospect	APR-JUL	33.9	29.6	87	124	53				
ROGUE RIVER ab Prospect	APR-JUL	244.9	203.3	83	111	55				
	APR-SEP	299.5	248.7	83	107	59				
SF ROGUE near Prospect	APR-JUL	58.9	49.3	84	121	48				
	APR-SEP	69.9	57.7	83	112	56				
ROGUE RIVER at Raygold	APR-JUL	721.9	606.4	84	115	53				
	APR-SEP	879.9	739.1	84	112	56				
ROGUE RIVER at Grants Pass	APR-JUL	732.9	593.7	81	114	48				
	APR-SEP	875.8	709.4	81	114	48				
SUCKER CREEK bl Little Grayback	APR-JUL	55.6	47.3	85	129	40				
NORTH UMPQUA nr Toketee Falls	APR-SEP	163.9	136.0	83	102	64				
NORTH UMPQUA at Winchester	APR-JUL	751.1	623.4	83	108	58				
SOUTH UMPQUA at Brockway	APR-JUL	376.6	312.6	83	108	58				
SOUTH UMPQUA near Tiller	APR-JUL	180.3	149.7	83	108	58				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
APPLEGATE	75.2	12.7	11.4	---
EMIGRANT LAKE	39.0	23.1	21.0	23.8
FISH LAKE	8.0	3.2	4.5	5.5
FOURMILE LAKE		NO REPORT		
HOWARD PRAIRIE	60.0	43.0	51.7	40.7
HYATT PRAIRIE	16.1	10.7	13.1	11.0
LOST CREEK **	315.0	142.7	161.0	---

WATERSHED SNOWPACK ANALYSIS

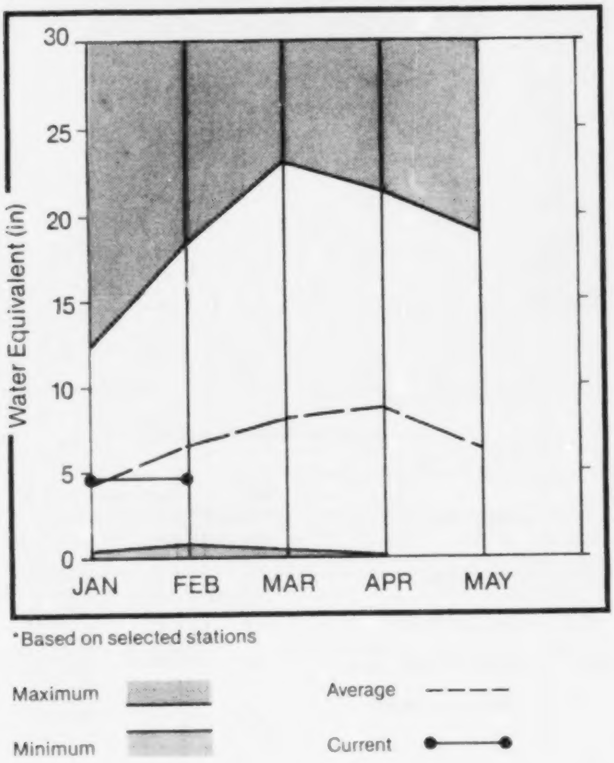
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Applegate River	5	62	80
Bear Creek	5	57	73
Butte Creek	6	66	79
Illinois River	3	50	49
North Umpqua River	10	55	64
Rogue River	21	62	84
Mt. Ashland	4	59	74

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

**Multiple Purpose Reservoir...Space Reserved Primarily For Flood Control.
See Pages 30-31 for Forecast Date of Low Flow Values.

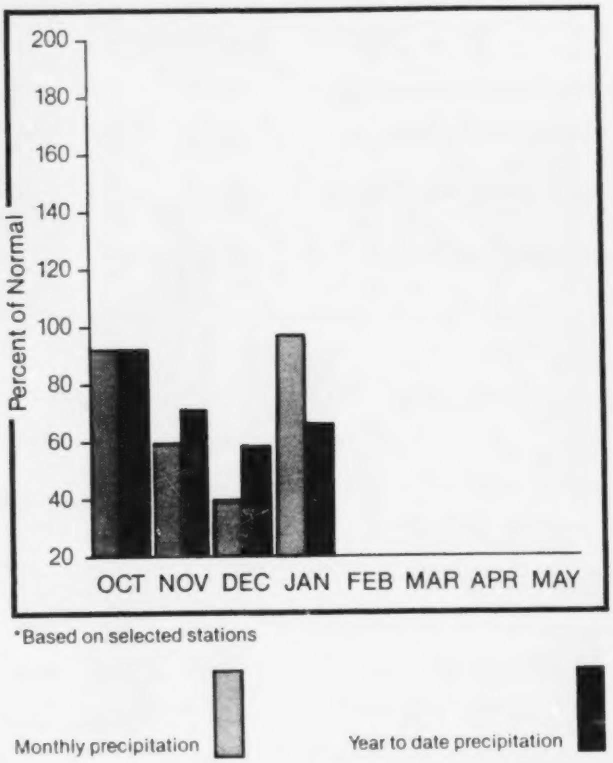
Klamath Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Spring and summer water supplies in the Klamath Basin are forecast to be below normal this year. Mountain snowpack ranges from 67% of normal on the Lost River to 98% in the Upper Klamath Lake drainage. January's precipitation was one of the highest in Oregon (97% of normal). However, for the Oct-Jan period it is one of the lowest (66% of normal). Reservoir storage is above average for this time of year.

For more information contact your local Soil Conservation Service office.

KLAMATH BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLEAR LAKE net Inflow	FEB-JUL	88.0	77.4	87	133	43				
GERBER RESERVOIR net Inflow	FEB-JUL	38.4	34.6	90	133	47				
SPRAGUE near Chiloquin	FEB-SEP	324.4	272.5	84	125	43				
	APR-SEP	227.7	191.3	84	135	33				
UPPER KLAMATH LAKE net Inflow	FEB-SEP	840.6	739.7	87	114	62				
	APR-SEP	502.3	442.0	87	135	41				
WILLIAMSON near Chiloquin	FEB-SEP	565.7	480.8	84	117	53				
	APR-SEP	386.8	329.0	85	126	44				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (CALIF)	513.3	303.6	361.7	207.8
GERBER	94.3	60.6	68.8	43.3
UPPER KLAMATH LAKE	523.7	382.0	316.6	362.9

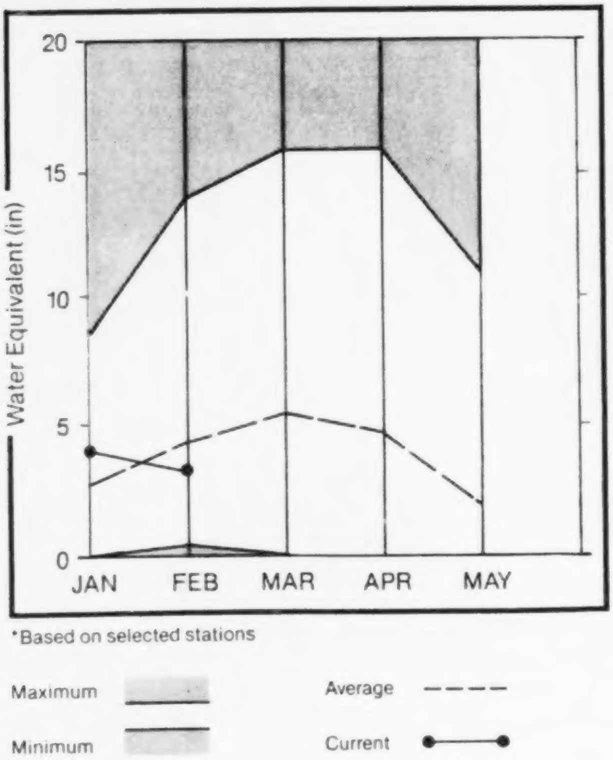
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Lost River	5	52	67
Sprague River	5	94	83
Upper Klamath Lake	17	79	98
Williamson River	5	81	93

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

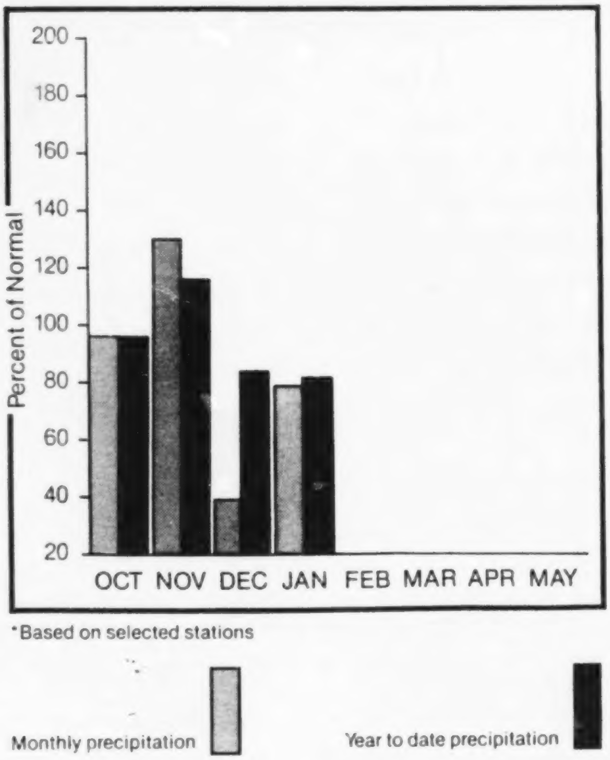
Lake County and Goose Lake Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be near normal this year in Lake County. Mountain snowpack ranges from 57% of average on Twentymile Creek to 113% on Silver Creek. Precipitation during January was 79% of normal while it has been 81% for the Oct-Jan period. Reservoir storage is below average for this time of year. Summer streamflow will recede a few days early this year.

For more information contact your local Soil Conservation Service office.

LAKE COUNTY AND GOOSE LAKE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BRIDGE CREEK at Spahr Ranch	APR-JUL	3.4	3.4	100	147	59				
CHEWAUCAN near Paisley	MAR-JUL	82.4	74.1	89	126	53				
COTTONWOOD CK near Lakeview	MAR-JUL	10.9	9.8	89	138	37				
DEEP CREEK near Adel	MAR-JUL	76.2	70.9	93	143	43				
DREWS RESERVOIR net Inflow	MAR-JUL	39.5	34.8	88	149	53				
HONEY CREEK near Plush	MAR-JUL	18.9	18.0	95	164	53				
SILVER CREEK near Silver Lake	APR-JUL	14.1	13.1	92	142	43				
TWENTYMILE near Adel	MAR-JUL	26.0	24.4	93	177	50				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COTTONWOOD	8.7	358.1	1.6	2.9
DREWS	63.0	29.8	44.2	34.2
THOMPSON VALLEY	18.4	10.6	13.7	13.3

WATERSHED SNOWPACK ANALYSIS

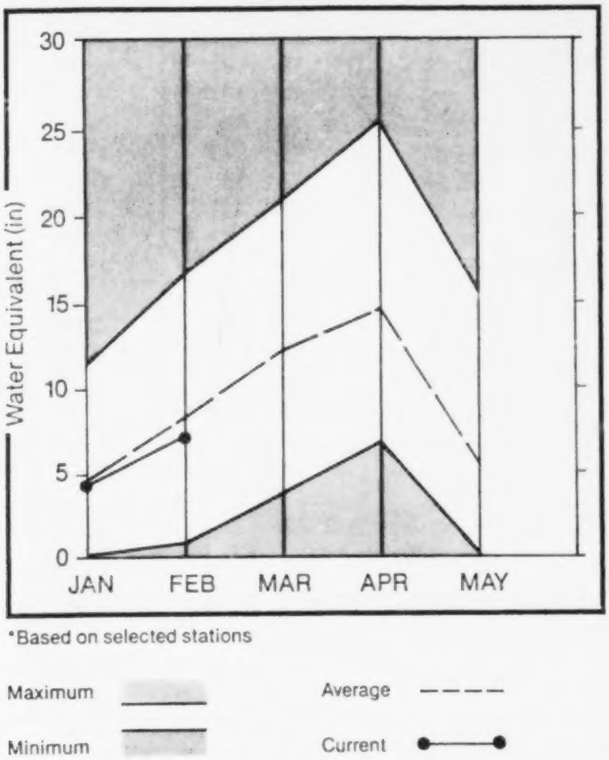
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Chewaucan River	4	66	71
Deep Creek	5	55	57
Drew Creek	4	64	64
Honey Creek	4	49	61
Silver Creek (Lake Co.)	3	86	113
Twentymile Creek	6	47	51

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

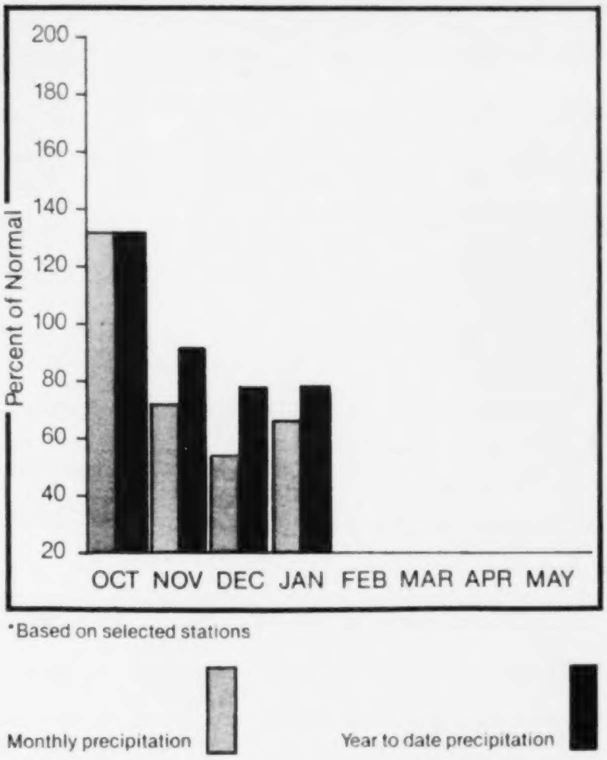
Harney Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Summer streamflows are forecast to be near normal this year. Mountain snowpack ranges from 82% of normal in the Trout Creek mountains to 103% in the Donner Und Blitzen River drainage. January's precipitation was the lowest in Oregon (67% of normal). For the water year to date, (October through January), the precipitation has been 78%. The July 1 Malheur Lake elevation is forecast to be 4101.2 feet this year. Last year on this date it was 4101.87 feet.

For more information contact your local Soil Conservation Service office.

HARNEY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
DONNER UND BLITZEN nr Frenchglen	MAR-JUL	61.8	**60.6**	**98**	149	49				
	APR-SEP	58.9	**57.7**	**97**	144	51				
SILVER CREEK near Riley	APR-JUL	15.5	**15.5**	**100**	181	19				
SILVES near Burns	MAR-JUL	96.6	**88.9**	**92**	138	46				
	APR-SEP	76.9	**70.8**	**92**	159	25				
TROUT CREEK nr Denio	MAR-JUL	9.3	**8.1**	**87**	151	22				
	APR-SEP	8.8	**7.7**	**87**	148	23				

RESERVOIR STORAGE (1000AF)				
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Donner und Blitzen River	3	90	**103**
Silver Creek (Harney Co)	2	78	**87**
Silvies River	6	85	**95**
Trout Creek	1	94	**82**

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

MALHEUR LAKE ELEVATION FORECAST:

		Gage Height	Surface Acres	Avg. Surface Acres
Malheur Lake at Break in Cole Island Dike nr Voltage				
	Jul 1	4101.2	114,600	40,000
	Aug 1	4100.8	111,400	33,000

HISTORICAL DATA (COLUMBIA RIVER AT THE DALLES)

Year	STREAMFLOW (1,000 AF)			REGULATED PEAK (1,000cfs)	DATE
	APR-SEP	APR-JUN	MAY-JUN		
1961	101,940	76,860	66,185	699	JUN 8
1962	95,260	66,516	50,819	460	JUN 5
1963	87,860	58,499	47,812	437	JUN 18
1964	110,422	73,512	63,670	662	JUN 18
1965	114,222	80,098	62,467	520	JUN 9
1966	87,386	58,250	45,962	396	JUN 12
1967	109,319	74,378	66,452	622	JUN 10
1968	89,102	55,593	47,994	404	JUN 13
1969	112,377	85,742	63,899	515	MAY 15
1970	88,243	62,993	55,227	425	MAY 28
1971	126,898	91,781	76,453	557	MAY 13
1972	135,500	97,041	81,451	619	JUN 20
1973	65,549	43,765	36,565	221	DEC 5
1974	139,501	99,035	78,946	588	JUN 20
1975	108,906	73,018	62,861	422	MAY 17
1976	122,771	79,084	62,554	418	MAY 14
1977	54,108	35,505	28,394	213	JAN 25
1978	100,968	67,287	52,035	313	JUN 10
1979	76,700	54,900	44,984	311	MAY 25
1980	91,631	68,229	53,704	345	JUN 18
1961-80 AVG	100,933	70,104	57,422	457	

LOWER COLUMBIA RIVER FLOOD STAGES (WITH 9.5' TIDE AT ASTORIA)

VANCOUVER GAGE (NWS)	FLOW AT THE DALLES (1,000 cfs)	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

Forecast Date of Low Flow Values

	Forecast Point	Low Flow Value Second/Ft	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
OWYHEE AND MALHEUR BASINS	Owyhee nr Rome	2000	May 15	May 14
		1000	May 29	May 28
		500	Jun 11	Jun 11
BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS	Eagle Ck above Skull Ck	225	Jul 23	Jul 25
		160	Aug 2	Aug 5
	Catherine Ck near Union	47	Aug 1	Avg Value 49
		100	Jul 6	Jul 9
		50	Jul 24	Jul 28
	Powder near Sumpter	100	Jun 21	Jun 25
		20	Jul 18	Jul 22
	Deer Ck ab Phillips Resv nr Sumpter	40	Jun 14	Jun 17
		10	Jul 1	Jul 6
UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS	Umatilla at Pendleton	550	May 15	May 17
	SF Walla Walla nr Milton	200	Jun 4	Jun 9
		100	Aug-Sep Min Flow	Avg Value 105
UPPER JOHN DAY BASIN	John Day at Service Ck	190	Aug 1	Avg Value 212
UPPER DESCHUTES AND CROOKED BASINS	Crane Prairie Net Inflow	434	Peak	
		261	Oct 31	
		Peak	May 22	
	Crooked R nr Post	100	May 30	Jun 1
	Deschutes blw Bend	1500	Not Forecast	Jul 1
	Little Deschutes nr LaPine	400	Jun 4	Jun 7
		200	Jul 4	Jul 8
	Squaw Ck nr Sisters	100	Aug 13	Aug 16
	Tumalo Ck nr Bend	235	Jun 23	Jun 23
		207	Jun 26	Jun 25
		150	Jul 6	Jul 5
		71	Aug 8	Aug 7

Forecast Date of Low Flow Values

	Forecast Point	Low Flow Value Second/Ft	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS	Clear Branch Inflow	* 38	Jul 15-31	**39
	White bl Tygh Valley	200	Jul 5	Jul 3
				Avg Value
		147	Aug 1	145
ROGUE AND UMPQUA BASINS	Cow Ck nr Azalea	20	Jul 1	Jul 4
		10	Aug 15	Aug 19
	Little Butte Ck SF	100	May 12	May 15
	South Umpqua nr Brockway	90	Jul 27	Jul 30
	South Umpqua at Tiller	140	Jul 7	Jul 10
		90	Jul 27	Jul 30
		60	Aug 24	Aug 27
LAKE COUNTY AND GOOSE LAKE BASINS	Deep Ck above Adel	100	Jun 19	Jun 21
	Honey Ck near Plush	100	May 13	May 15
		50	May 28	May 30
	Twentymile near Adel	50	May 29	Jun 2
		10	Jun 29	Jul 3
HARNEY BASIN	Silvies near Burns	400	May 3	May 5
		200	May 19	May 21
		100	Jun 7	Jun 9
		50	Jun 21	Jun 23
	Donner und Blitzen	200	Jun 14	Jun 15
		100	Jul 4	Jul 5

* Average cfs forecast to flow for this two-week period.

** Average cfs for period of record.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State

- Oregon Department of Water Resources
- Oregon State University
- Soil and Water Conservation Districts of Oregon

Federal

- U.S. Department of Agriculture
  - Extension Service
  - Forest Service
- U.S. Department of Army
  - Corps of Engineers
- U.S. Department of Commerce
  - NOAA, National Weather Service
- U.S. Department of Energy
  - Bonneville Power Administration
- U.S. Department of the Interior
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey

Local

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- City of Baker
- City of La Grande
- City of Portland
- City of The Dalles
- City of Walla Walla
- Douglas County Water Resources Survey
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control – Owyhee Project
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control – Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale – Oregon Irrigation District
- Warmsprings Irrigation District

Private

- Pacific Power and Light Company
- Portland General Electric Company
- The Crag Rats, Hood River, Oregon

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

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SOIL CONSERVATION SERVICE
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Oregon Water Supply Outlook

March 1, 1986

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Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Oregon Water Supply Outlook

and

Federal – State – Private Cooperative Snow Surveys

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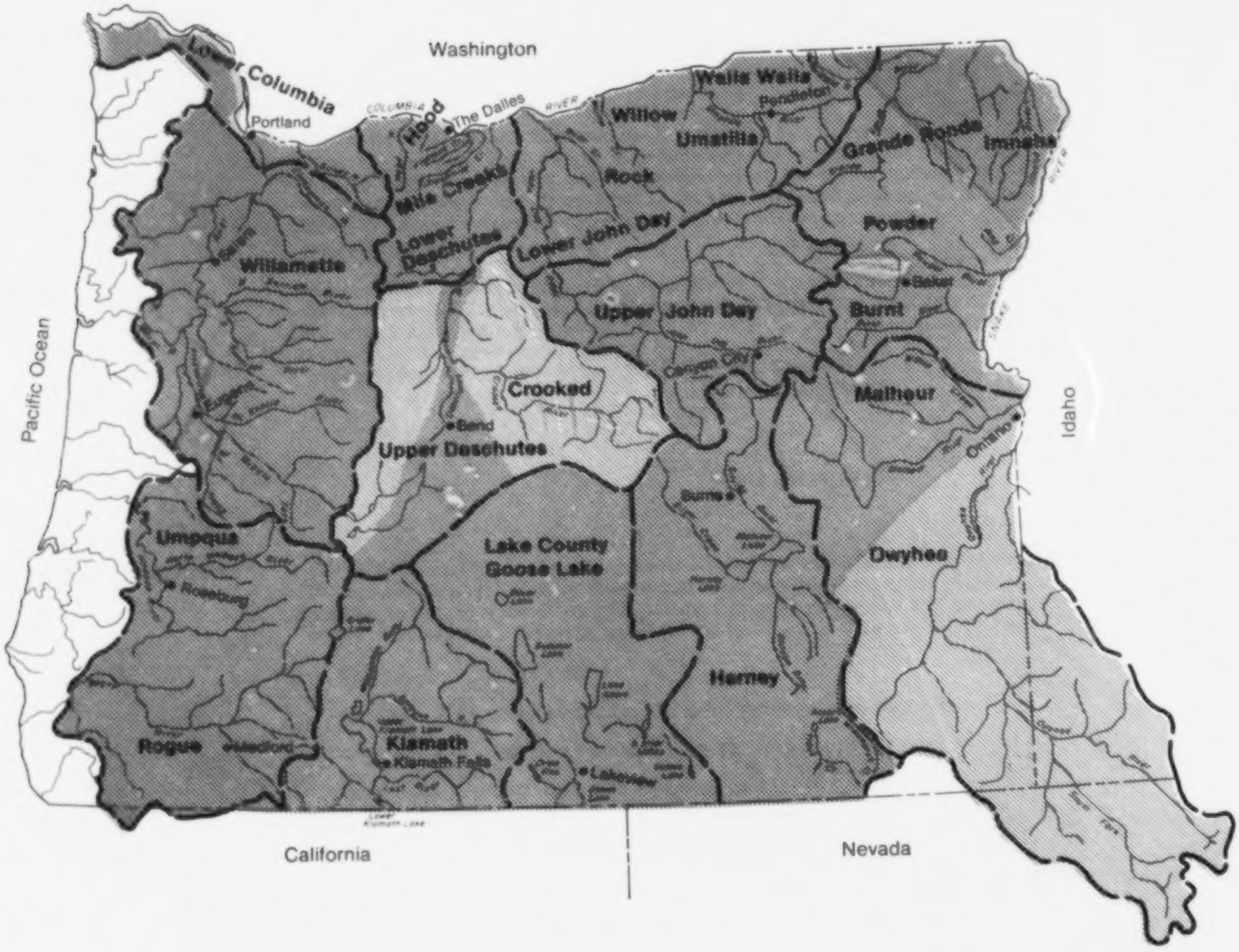
Streamflow Prospects for Oregon

Spring and Summer Period



Streamflow Prospects

■ Much above average: (>130%)

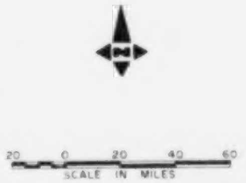
▨ Above average: (110-130%)

▩ Near average: (90-110%)

░ Below average: (70-90%)

▦ Much below average: (<70%)

□ Not forecast



GENERAL OUTLOOK

SUMMARY:

NEAR NORMAL SPRING AND SUMMER WATER SUPPLIES ARE FORECAST FOR MOST OF OREGON. THE HIGH ELEVATION MOUNTAIN SNOWPACK REMAINS ABOVE AVERAGE. FEBRUARY PRECIPITATION WAS TWICE TO FOUR TIMES NORMAL. RESERVOIR STORAGE IS EXCELLENT.

SNOWPACK:

The snowpack remains above average at the higher elevations and below average (or gone) at the lower elevations. This elevation ranges from 5000' to 6400' in southern Oregon and 3500' to 5400' in the northern part of the state. During mid February, Oregon received a large amount of snow. The weather then turned warm and began raining. This warm rain melted much of the low elevation snow and, to a lesser degree, some of the higher snowpack. Some flooding resulted from the increased runoff.

PRECIPITATION:

During February, Oregon received precipitation that was two to four times the normal amounts. West of the Cascades it was 226% in the Willamette Valley and 260% in the Umpqua. Rogue watersheds. East of the Cascades the precipitation ranged from 219% to 379% of normal. February's precipitation helped raise the water year totals to near normal for most of the state and even above normal amounts for Lake, Harney, Malheur, and Deschutes Counties.

RESERVOIRS:

Twenty-nine principal irrigation reservoirs currently contain 2,839,300 acre feet of stored water. This is 133% of the March 1 average and 86% of usable capacity.

STREAMFLOW:

Oregon's February streamflow was much above average for most of the rivers and streams. There was some flooding due to the the warm rain on snow event during the latter part of the month. Streamflows ranged from 170% of average on the Deschutes to 356% on the Grande Ronde.

Prospective streamflow as percent of average on representative Oregon streams is as follows:

STREAM	PERIOD	% OF AVERAGE
OWYHEE NET INFLOW	MAR-JUL	135%
GRANDE RONDE AT LAGRANDE	APR-SEP	95%
UMATILLA AT PENDLETON	MAR-SEP	103%
DESCHUTES AT BENHAM FALLS	APR-SEP	104%
WILLAMETTE MF NR OAKRIDGE	APR-SEP	100%
ROGUE AT RAYGOLD	APR-SEP	88%
UPP. KLAMATH LK NET INFLOW	APR-SEP	100%
SILVIES NEAR BURNS	APR-SEP	98%

Malheur Lake in Harney County is expected to be lower this year than it was last year. The July level is forecast to be 4101.20 feet with a surface of 114,600 acres. This is 00.67 feet less than the elevation on July 1, 1985. The normal surface of this lake on July 1 is 40,000 acres.

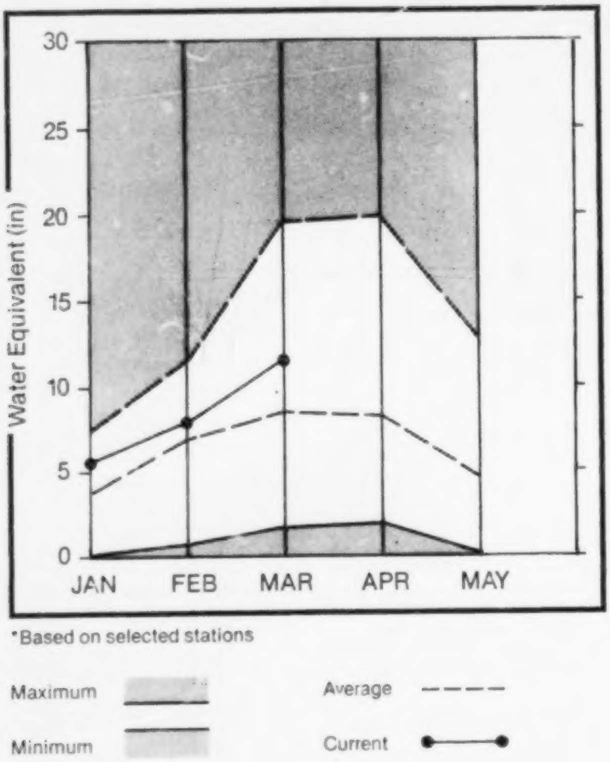
These forecasts assume normal weather conditions will occur throughout the forecast period.

The forecasts in this bulletin are a result of coordinated activity between the Soil Conservation Service and the National Weather Service in an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA, National Weather Service and other cooperators.

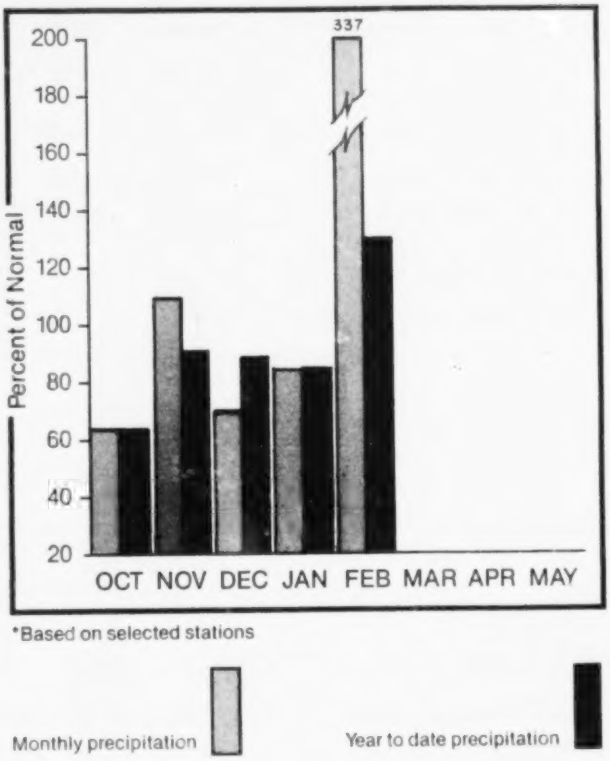
Owyhee and Malheur Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Spring and summer water supplies are forecast to be near normal this year. Generally the snowpack above the 6400' elevation is above average while it is below average at lower elevations. Using all the snow courses in the basin, the snowpack is 145% of average. February's precipitation was 337% of normal. This brought the water year to date figures to 130%. Reservoir storage is excellent with all principal irrigation reservoirs above average for March 1. Streamflows should recede later than normal.

For more information contact your local Soil Conservation Service office.

OWYHEE AND MALHEUR BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BULLY CREEK at Warmsprings	MAR-MAY	14.4	13.5	93	174	28				
MALHEUR near Drewsev	MAR-JUL	91.4	88.6	96	139	55				
	APR-SEP	69.6	65.4	93	136	52				
MALHEUR, NORTH FORK at Beulah	MAR-JUL	70.9	68.8	97	137	58				
MALHEUR near Drewsey	APR-SEP	62.8	59.0	93	135	53				
OWYHEE RESERVOIR net Inflow	MAR-JUL	492.2	664.5	135	184	86				
	APR-SEP	376.1	413.7	109	159	61				
OWYHEE at Rome	MAR-JUL	532.3	638.8	120	170	70				
SUCCOR CREEK nr Jordan Valley	MAR-JUL	14.3	15.7	109	161	63				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BEULAH RES	60.0	54.5	42.9	33.0
BULLY CREEK	30.0	23.6	19.0	17.0
OWYHEE	715.0	703.8	585.4	486.6
WARMSPRINGS	191.0	129.3	142.0	97.6

WATERSHED SNOWPACK ANALYSIS

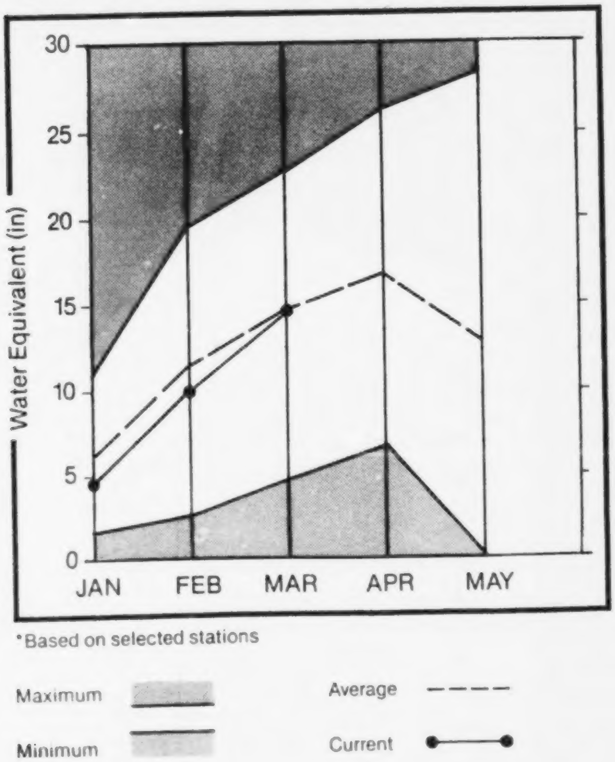
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Owyhee River	18	123	153
Malheur	9	89	106
Jordan Creek	2	139	160
Bully Creek	2	21	24

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

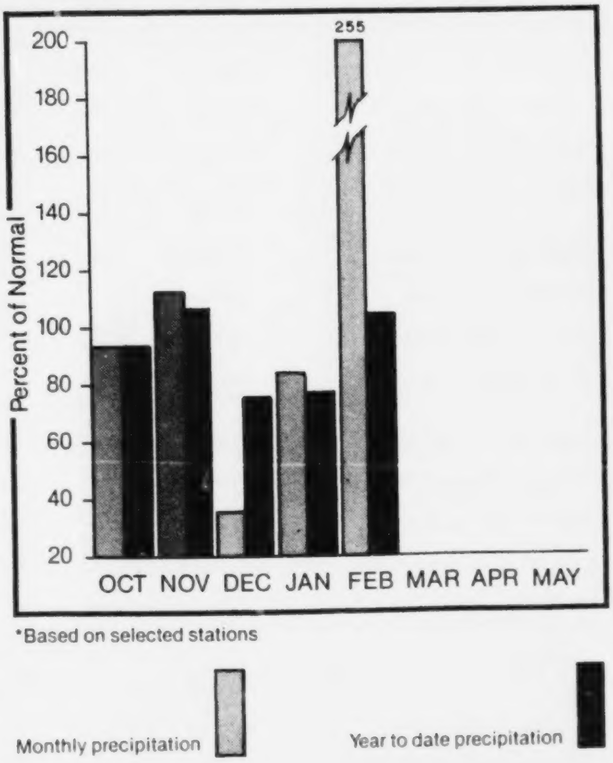
Burnt, Powder, Grande Ronde, and Imnaha Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies should be near normal this summer. The streams are forecast to range from 95% to 110% of average flow. The basinwide snowpack is 116% of average. The elevation break for above average to below average snow is 5000'. February precipitation was 2 1/2 times normal. For the water year to date it is 104%. Reservoir storage is good with only Wallowa Lake below the March 1 average. Summer streamflow recession will occur near the normal times.

For more information contact your local Soil Conservation Service office.

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
ANTHONY CREEK blw NF nr Powder	MAR-JUL	16.5	**18.2**	**110**	145	73				
BEAR CREEK near Wallowa	APR-SEP	65.6	**63.6**	**96**	123	70				
BIG CREEK blw Burn Ck	MAR-JUL	11.7	**12.5**	**106**	136	76				
BURNT near Hereford	MAR-JUL APR-SEP	43.2 34.3	**49.2** **36.7**	**113** **106**	153 157	74 50				
CATHERINE CK near Union	APR-SEP	63.7	**66.9**	**105**	124	86				
DEER CK near Sumpter	MAR-JUL	17.4	**19.0**	**109**	149	69				
EAGLE CK above Skull Ck	APR-JUL	166.9	**177.3**	**104**	130	80				
GRANDE RONDE at La Grande	MAR-JUL APR-SEP	197.6 161.9	**197.6** **153.8**	**100** **94**	130 154	70 36				
HURRICANE CK near Joseph	APR-SEP	45.8	**44.9**	**98**	118	79				
IMNAHA at Imnaha	APR-SEP	300.7	**296.5**	**98**	129	69				
LOSTINE near Lostine	APR-SEP	122.9	**116.8**	**95**	112	78				
PINE CREEK near Oxbow	MAR-JUL	216.3	**222.8**	**103**	133	73				
POWDER near Sumpter	APR-JUL APR-SEP	55.7 56.8	**61.3** **62.5**	**110** **110**	144 144	75 76				
EAST FORK WALLOWA near Joseph	MAR-SEP APR-SEP	11.6 11.1	**13.0** **11.5**	**112** **103**	129 117	95 90				
WALLOWA at Joseph	MAR-JUL	74.5	**83.4**	**111**	162	62				
WOLF CK RESERVOIR net Inflow	MAR-JUN	13.7	**15.1**	**110**	161	58				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
PHILLIPS LAKE	73.5	**47.8**	60.4	31.1
THIEF VALLEY	17.4	**18.2**	17.7	16.2
UNITY	25.2	**21.1**	16.4	14.6
WALLOWA LAKE	37.5	**18.1**	16.7	21.6
WOLF CREEK	10.4	**3.7**	4.6	---

WATERSHED SNOWPACK ANALYSIS

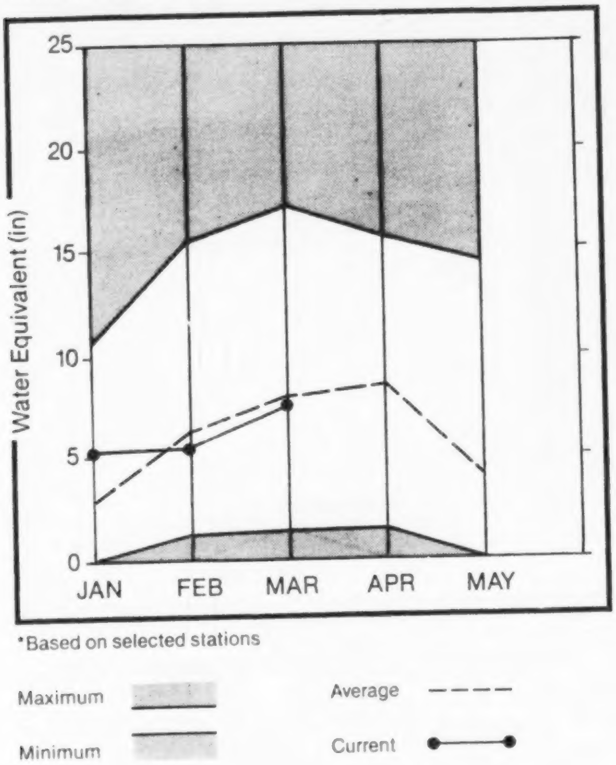
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Grande Ronde ab LaGrande	3	103	**109**
Powder River	7	109	**117**
Wallowa,Imnaha,Catherine	3	127	**113**
Burnt River	3	90	**111**

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

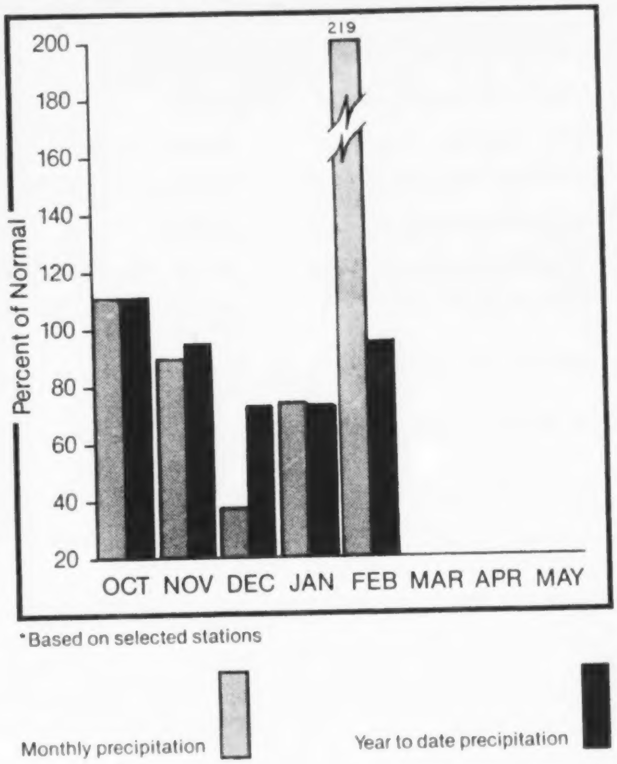
Umatilla, Walla Walla, Willow, Rock, and Lower John Day Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Spring and summer water supplies are forecast to be near normal this year. Streamflows should range between 92% to 112% of average. The March 1 mountain snowpack is below average. Precipitation during February was twice normal, but it is only 95% of normal for the water year to date. McKay reservoir storage is excellent. It currently contains 1 1/2 times the March 1 normal water amount. The timing for streamflow recession should be near normal this summer.

For more information contact your local Soil Conservation Service office.

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BUTTER CK NEAR PINE CITY	MAR-JUL	11.6	11.3	97	147	52				
COUSE CK nr Milton Freewater	MAR-JUL	5.5	5.4	98	127	55				
MCKAY near Pilot Rock	APR-SEP	23.8	21.9	92	151	34				
PINE CKEEK near Weston	MAR-JUL	4.3	4.0	93	140	47				
RHEA CREEK near Heppner	MAR-JUL	7.2	6.8	94	125	56				
ROCK CREEK above Cayuse Canyon	MAR-JUL	15.5	16.3	105	142	71				
UMATILLA near Gibbon	MAR-SEP	98.6	98.6	100	131	69				
	APR-SEP	76.7	72.9	95	126	64				
UMATILLA near Pendleton	MAR-SEP	203.8	209.9	102	139	67				
	APR-SEP	146.9	142.5	97	138	56				
SF WALLA WALLA nr Milton Freewater	MAR-SEP	80.3	79.0	98	110	78				
	APR-SEP	67.4	62.0	91	111	73				
WILLOW CREEK near Heppner	MAR-JUL	7.7	8.6	111	143	78				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COLD SPRINGS	50.0	20.1	28.5	37.7
MCKAY	73.8	59.2	43.3	40.1
WILLOW CREEK	1.8	2.3	---	---

WATERSHED SNOWPACK ANALYSIS

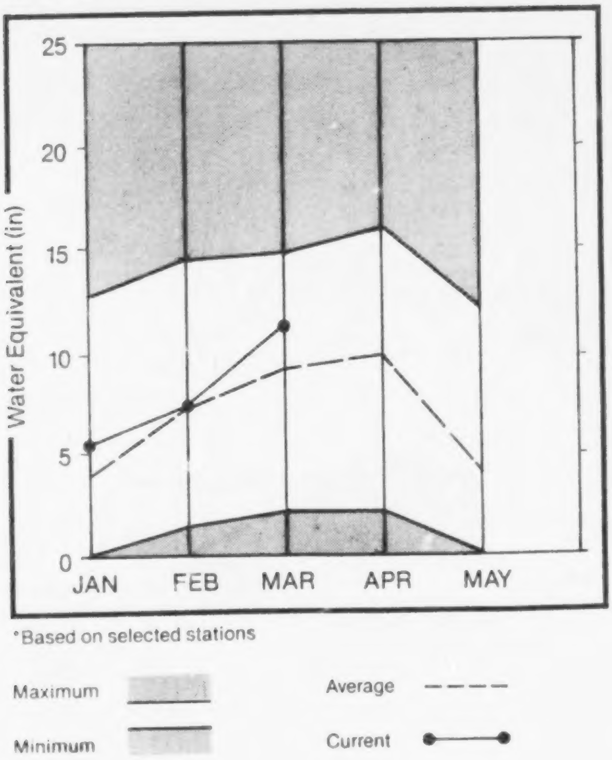
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Walla Walla River	0	0	0
Umatilla River	2	73	93
McKav Creek	1	72	89

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

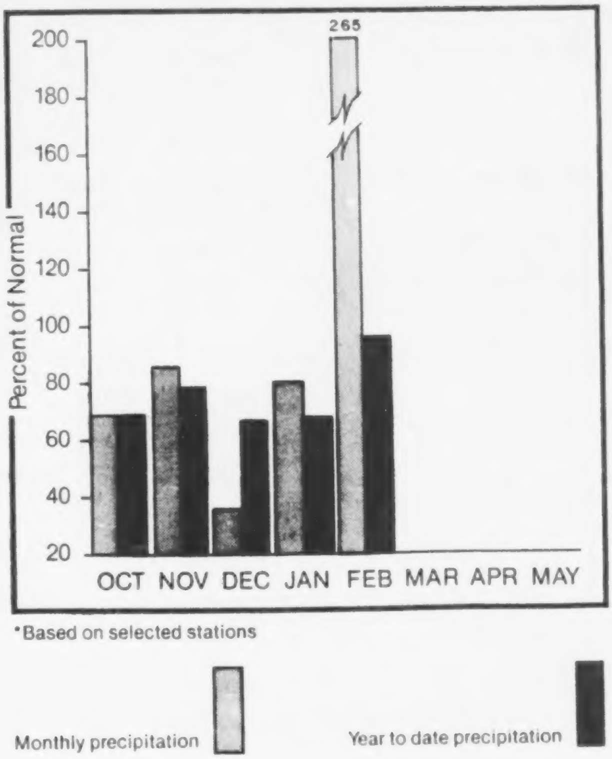
Upper John Day Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Near normal water supplies are forecast for the Upper John Day basin. The mountain snowpack is 125% of normal with most of it above the 5000' elevation. Precipitation was 265% of normal during February. It is currently 96% of normal for the water year to date. Streamflows should recede near normal this summer.

For more information contact your local Soil Conservation Service office.

UPPER JOHN DAY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CAMAS CREEK nr Ukiah	MAR-JUL	43.5	47.0	108	149	67				
	APR-SEP	34.2	35.6	104	146	61				
NF JOHN DAY at Ritter	MAR-JUL	133.0	153.0	115	146	84				
	APR-SEP	112.0	129.0	115	146	84				
NF JOHN DAY at Monument	MAR-JUL	658.3	733.3	111	137	85				
	APR-SEP	539.0	535.0	99	130	69				
MOUNTAIN CREEK near Mitchell	MAR-JUL	4.5	4.6	102	133	67				
STRAWBERRY CREEK nr Prairie City	MAR-JUL	7.3	7.6	104	137	68				
	APR-SEP	7.8	7.8	100	128	64				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

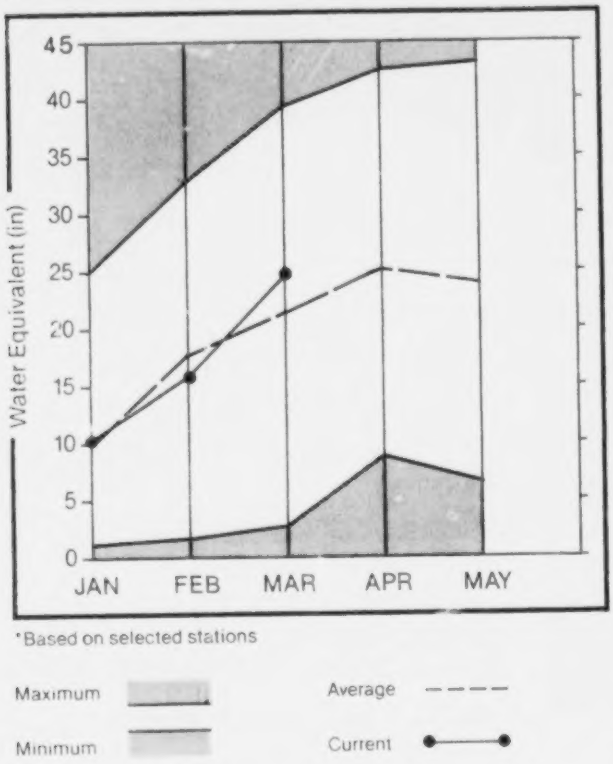
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
John Day, North Fork	5	111	115
John Day above Dayville	7	112	123

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

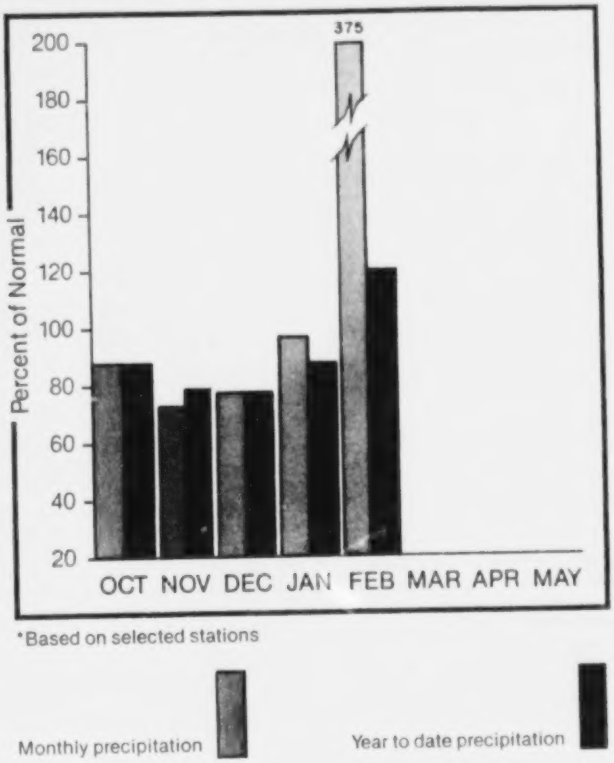
Upper Deschutes and Crooked Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be near normal to above normal this summer. The snowpack on March 1 was 128% of normal throughout the basin. February's precipitation was one of the heaviest in the state with 375% of average amounts being received. Since October 1 the precipitation has been 120% of average. Reservoir storage is excellent with all irrigation reservoirs nearly full. Most streams will flow a few days longer than normal this summer.

For more information contact your local Soil Conservation Service office.

UPPER DESCHUTES AND CROOKED BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BEAVER CREEK nr Paulina	MAR-JUL	31.4	36.1	114	150	80				
	APR-SEP	16.8	18.8	111	149	77				
CRANE PRAIRIE RES net Inflow	MAR-JUL	86.5	96.9	112	146	77				
	APR-SEP	113.2	123.4	109	143	75				
CRESCENT CK nr Crescent Lake	MAR-JUL	18.8	21.6	114	144	85				
	APR-SEP	19.9	22.3	112	146	80				
CROOKED nr Prineville	MAR-JUL	144.4	180.5	125	178	72				
	APR-SEP	93.9	107.0	113	167	61				
NF CROOKED blw Lookout Ck	MAR-JUL	13.1	14.4	109	145	76				
DESCHUTES AT BEND	AUG-SEP	174.0	174.0	100	125	75				
DESCHUTES at Benham Falls	APR-JUL	352.9	374.1	106	125	87				
	APR-SEP	539.9	561.5	104	124	84				
DESCHUTES Below Snow Creek	MAR-SEP	65.4	71.9	109	135	86				
	APR-SEP	59.3	64.0	107	138	78				
LITTLE DESCHUTES nr Lapine	MAR-JUL	81.9	87.6	106	136	79				
	APR-SEP	77.3	80.4	104	129	78				
OCHOCO RESERVOIR net Inflow	MAR-JUL	26.2	31.4	119	198	42				
	APR-SEP	17.7	20.4	115	192	40				
SQUAW CREEK nr Sisters	APR-SEP	47.7	55.0	115	136	94				
TUMALO CREEK near Bend	APR-SEP	44.3	50.0	112	129	97				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CRANE PRAIRE	55.3	52.0	42.1	44.5
CRESCENT LAKE	86.9	76.2	82.5	52.6
OCHOCO	47.5	43.4	25.0	23.3
PRINEVILLE	153.0	127.3	77.0	105.1
WICKIUP	200.0	197.3	184.4	171.0

WATERSHED SNOWPACK ANALYSIS

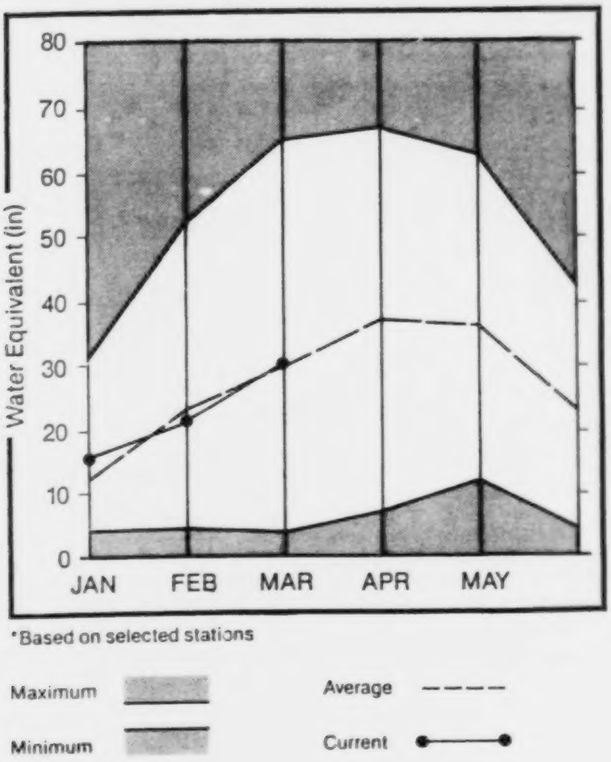
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Crooked, Ochoco	4	93	147
Deschutes above Wickiup	3	91	109
Little Deschutes	4	97	115
Tumalo and Squaw Creeks	5	102	124

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

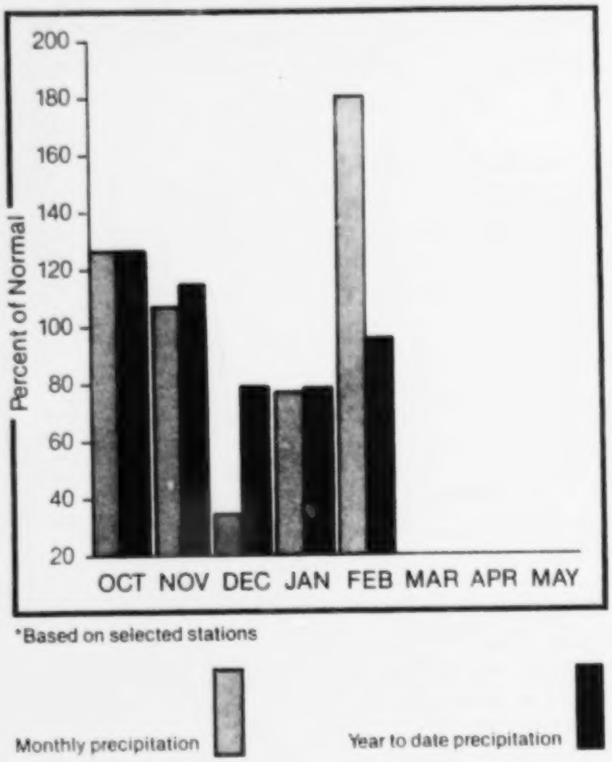
Hood, Mile Creeks, and Lower Deschutes Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Summer water supplies are forecast to be near normal this year. Streamflow should range from 100% to 107% of average. Mountain snowpack is 110% of the March 1 normal. Precipitation during February was 181% of average, while for the water year it has been 95%. Clear Lake reservoir currently contains 129% of average amounts of water.

For more information contact your local Soil Conservation Service office.

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
HOOD RIVER near Tucker Bridge	APR-JUL	238.2	**250.1**	**104**	126	84				
	APR-SEP	285.3	**293.9**	**103**	124	82				
WEST FORK HOOD RIVER nr Dee	APR-JUL	124.9	**133.6**	**106**	134	80				
	APR-SEP	146.4	**152.3**	**104**	130	78				
WHITE RIVER below Tygh Valley	APR-JUL	112.5	**114.8**	**102**	129	75				
	APR-SEP	127.5	**127.5**	**100**	125	75				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (WASCO)	11.9	**5.8**	6.8	4.5

WATERSHED SNOWPACK ANALYSIS

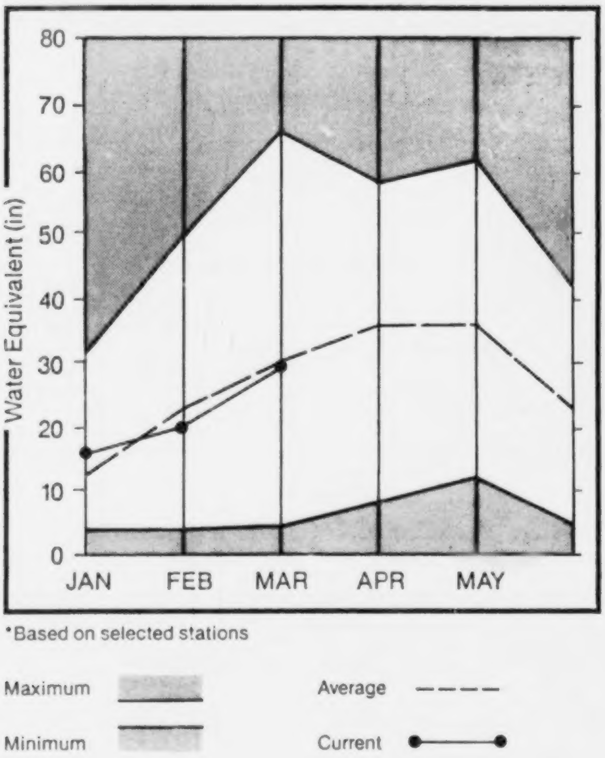
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Hood River	6	69	**112**
Mile Creeks	1	103	**150**
White River	3	66	**101**

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

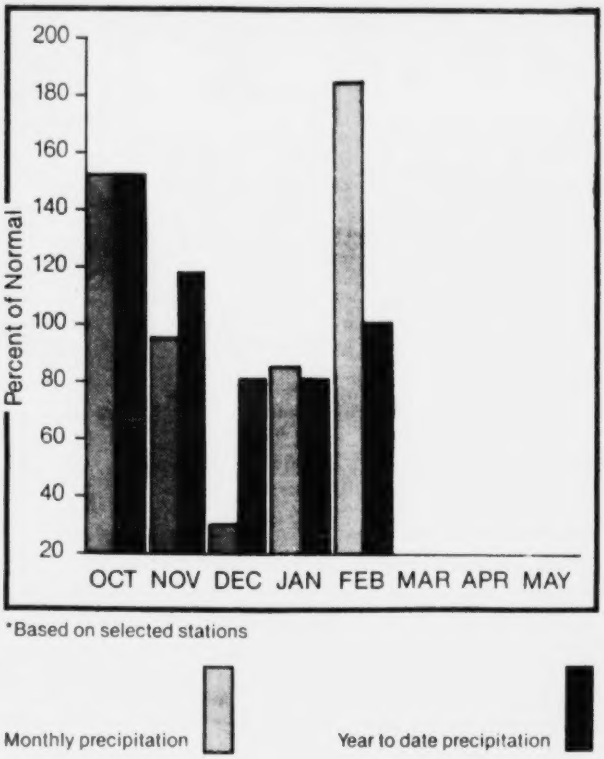
Lower Columbia Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows this spring and summer are forecast to be near normal on the Columbia at The Dalles (94%) and on the Sandy River (100%). Snowpack in the upper Columbia basin is 97% of normal. Generally the low elevation snow is below average and in the higher elevations it is above average. In the Sandy drainage the snow is 105% of average. Pecipitation during February was 185% of normal in the Columbia basin. This brings the water year to date precipitation to 99% of normal.

For more information contact your local Soil Conservation Service office.

LOWER COLUMBIA BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COLUMBIA at the Dalles	APR-JUL	86500.0	81100.0	94	107	81				
	APR-SEP	101000.0	95000.0	94	107	81				
SANDY RIVER near Marmot	APR-JUL	327.1	327.1	100	125	75				
	APR-SEP	380.8	380.8	100	120	80				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

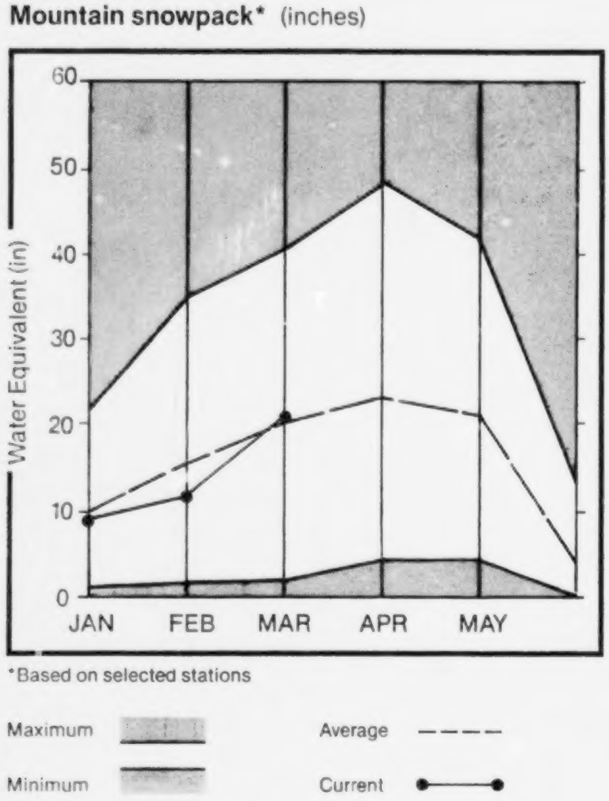
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Sandy River	3	66	101

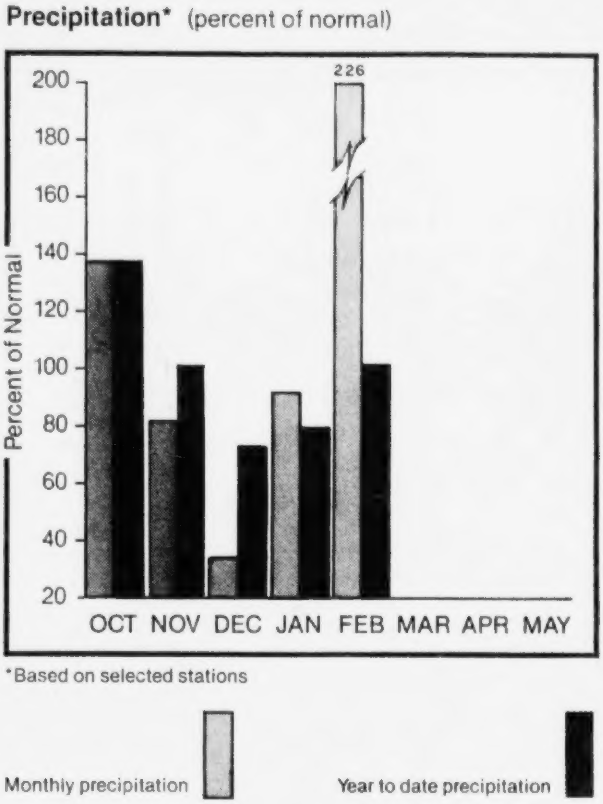
*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Page 29 for Historical Data and Flood Stages.

Willamette Basin


Mountain snowpack* (inches)

*Based on selected stations


Precipitation* (percent of normal)

*Based on selected stations

WATER SUPPLY OUTLOOK:

Near normal summer water supplies are expected this year. The forecast of streamflow ranges from 93% to 103% of average. The Willamette basin snowpack is only 90% of the March 1 average. This is the lowest in the state. February precipitation in the Willamette Valley was 226% of normal. For the water year to date it has been 102%. Irrigation reservoirs in the valley currently contain near average amounts of water.

For more information contact your local Soil Conservation Service office.

WILLAMETTE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLACKAMAS at Estacada	APR-JUL	652.0	652.0	100	124	76				
	APR-SEP	764.0	764.0	100	122	78				
CLACKAMAS above Three Lynx	APR-JUL	494.9	494.9	100	123	77				
	APR-SEP	587.3	587.3	100	121	79				
MCKENZIE at McKenzie Bridge	APR-JUL	440.4	431.6	98	114	82				
	APR-SEP	584.9	584.9	100	115	85				
MCKENZIE near Vida	APR-JUL	994.3	971.4	97	120	76				
	APR-SEP	1222.9	1150.0	94	116	72				
SF MCKENZIE at Rainbow	APR-JUL	201.9	209.2	103	126	82				
	APR-SEP	228.9	239.2	104	124	86				
MOHAWK near Springfield	MAR-JUL	115.8	121.6	105	135	75				
OAK GROVE FORK ab Power Intake	APR-JUL	131.4	124.8	94	118	72				
	APR-SEP	167.3	158.9	94	115	75				
ROW near Dorena	APR-JUL	98.6	91.7	93	139	47				
	APR-SEP	104.4	97.1	93	138	48				
NORTH SANTIAM at Mehama	APR-JUL	731.2	738.5	101	130	73				
	APR-SEP	830.1	846.5	104	130	73				
SOUTH SANTIAM at Waterloo	APR-JUL	534.4	539.7	101	138	64				
	APR-SEP	577.7	583.5	101	138	64				
SCOGGINS CREEK near Gaston	MAR-JUL	29.3	29.3	100	130	72				
THOMAS CREEK nr Scio	MAR-JUL	155.5	160.2	103	133	73				
COAST FORK WILLAMETTE nr London	APR-JUL	27.8	27.8	100	137	65				
MF OF WILLAMETTE bl NF nr Oakridge	APR-JUL	667.9	667.9	100	121	79				
	APR-SEP	763.8	763.8	100	120	80				
NF OF MF OF WILLAMETTE nr Oakridge	APR-JUL	182.3	182.3	100	126	74				
	APR-SEP	203.9	203.9	100	124	76				
WILLAMETTE at Salem	APR-JUL	4171.1	4212.8	100	134	68				
	APR-SEP	4655.0	4701.6	101	132	70				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BLUE RIVER **	85.5	50.0	26.6	30.8
COTTAGE GROVE **	29.8	9.3	7.7	7.9
COUGAR **	155.2	89.0	25.4	40.2
DETROIT **	300.7	215.4	46.7	99.6
DORENA **	70.5	50.6	16.0	18.5
FALL CREEK **	115.5	65.2	42.0	29.8
FERN RIDGE **	109.6	54.1	36.5	36.2
FOSTER **	29.7	9.6	6.6	5.5
GREEN PETER **	268.2	205.0	61.1	96.1
HILLS CREEK **	200.2	144.7	63.0	63.0
LOOKOUT POINT **	337.0	236.9	67.8	91.1
TIMOTHY LAKE	61.7	50.9	41.4	51.4
HENRY HAGG LAKE	53.0	49.1	38.3	43.5

WATERSHED SNOWPACK ANALYSIS

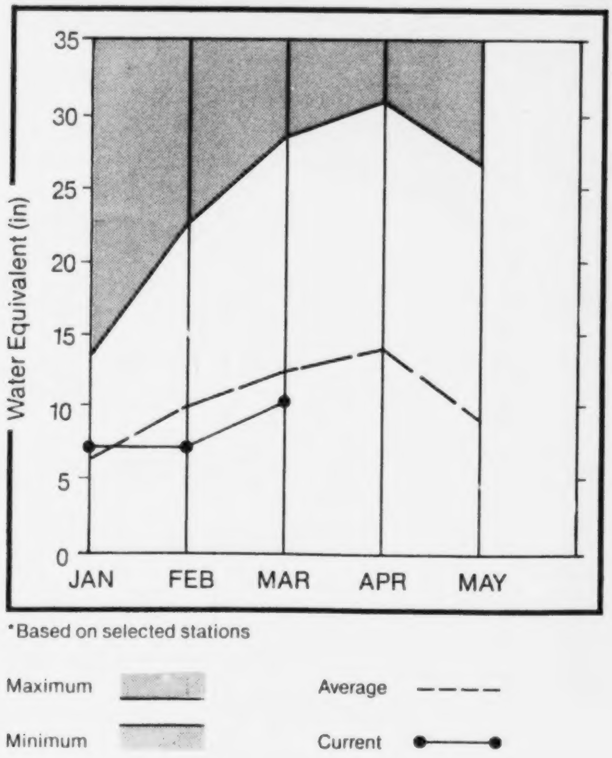
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Clackamas River	4	69	94
McKenzie River	2	66	83
Row River	0	0	0
Santiam River	6	89	117
Willamette, Middle Fork	4	79	97

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

****Multiple Purpose Reservoir...Space Reserved Primarily For Flood Control.**

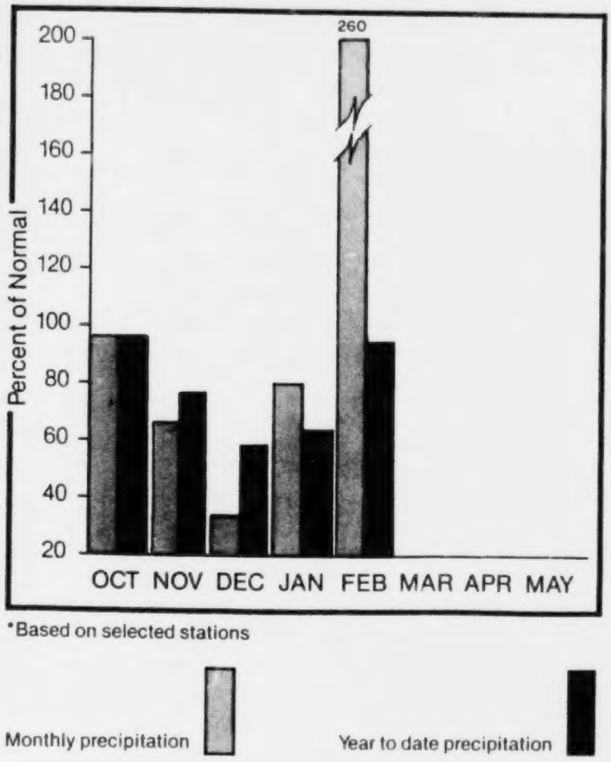
Rogue and Umpqua Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Spring and summer water supplies are forecast to be near normal this year. Streamflows should range from 88% to 97% of average. Much of the low-elevation snow is already gone from the mountains. The higher elevations still have an above average snowpack. The basinwide snowpack is currently 94% of average. Precipitation during February was 2 1/2 times normal. For the October-February period it has been 94% (this is the lowest in Oregon). Irrigation reservoirs currently contain excellent amounts of water.

For more information contact your local Soil Conservation Service office.

ROGUE AND UMPQUA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
APPLEGATE nr Copper	APR-SEP	123.4	111.1	90	129	51				
SF BIG BUTTE CK near Butte Falls	APR-JUL	34.4	32.7	95	131	61				
CLEARWATER above Trap Creek	APR-SEP	68.5	67.0	97	118	77				
COW CREEK near Azalea	MAR-JUL	30.5	27.5	90	115	66				
FOURMILE LAKE net Inflow	APR-JUL	3.9	3.7	94	154	51				
GRAVE CREEK at Pease Bridge	MAR-JUL	14.6	13.9	95	130	62				
HYATT PRAIRIE RES net Inflow	APR-JUL	4.7	4.4	93	149	43				
ILLINOIS near Kerby	APR-JUL	179.6	165.2	91	141	43				
	APR-SEP	186.7	171.8	92	153	31				
NF LITTLE BUTTE CK nr Lakecreek	APR-SEP	13.2	12.1	91	121	61				
SF LITTLE BUTTE CK nr Lakecreek	APR-SEP	32.1	28.9	90	159	22				
RED BLANKET CK nr Prospect	APR-JUL	33.9	31.2	92	127	56				
ROGUE RIVER ab Prospect	APR-JUL	244.9	230.2	93	115	73				
	APR-SEP	299 5	281.5	93	113	75				
SF ROGUE near Prospect	APR-JUL	58.9	52.0	88	114	66				
	APR-SEP	69.9	62.9	89	112	69				
ROGUE RIVER at Raygold	APR-JUL	721.9	686.0	95	120	70				
	APR-SEP	879.9	836.0	95	123	69				
ROGUE RIVER at Grants Pass	APR-JUL	732.9	638.0	87	120	60				
	APR-SEP	875.8	780.2	89	120	60				
SUCKER CREEK bl Little Grayback	APR-JUL	55.6	50.0	89	124	56				
NORTH UMPQUA nr Tokatee Falls	APR-SEP	163.9	144.1	87	100	76				
NORTH UMPQUA at Winchester	APR-JUL	751.1	646.9	86	111	61				
SOUTH UMPQUA at Brockway	APR-JUL	376.6	328.4	87	113	63				
SOUTH UMPQUA near Tiller	APR-JUL	180.3	158.7	88	100	68				

RESERVOIR STORAGE (1000AF)				
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
APPLEGATE	75.2	29.9	26.7	---
EMIGRANT LAKE	39.0	28.2	28.1	29.1
FISH LAKE	8.0	6.0	---	5.7
FOURMILE LAKE	16.1	11.3	---	8.8
HOWARD PRAIRIE	60.0	52.6	51.7	42.3
HYATT PRAIRIE	16.1	12.4	13.0	11.7
LOST CREEK **	315.0	252.6	216.1	---

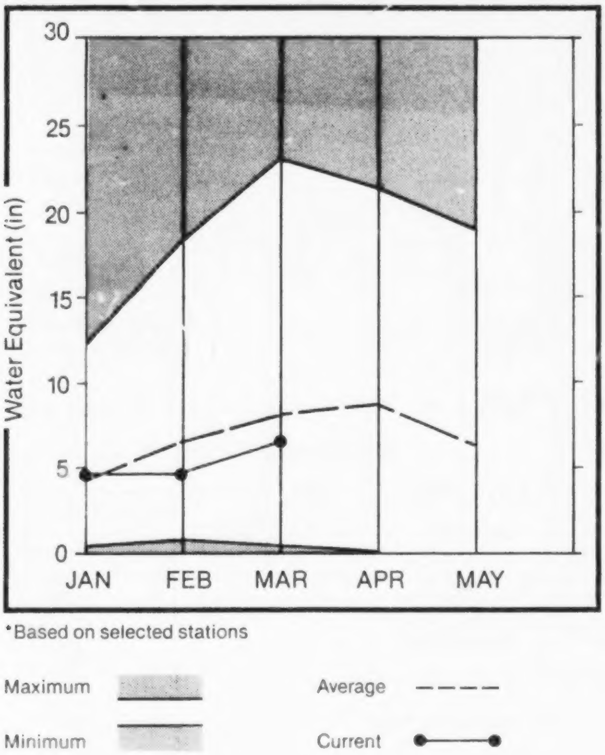
WATERSHED SNOWPACK ANALYSIS			
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Applegate River	3	93	102
Bear Creek	5	68	83
Butte Creek	5	50	81
Illinois River	2	0	0
North Umpqua River	10	66	81
Rogue River	21	72	96
Mt. Ashland	4	83	96

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

**Multiple Purpose Reservoir...Space Reserved Primarily For Flood Control.
See Pages 30-31 for Forecast Date of Low Flow Values.

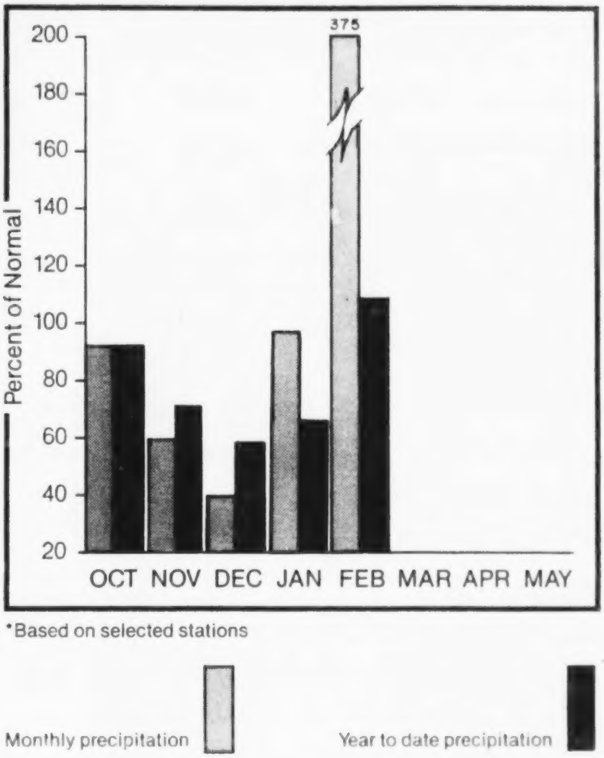
Klamath Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

The Klamath Basin should have near normal amounts of water this summer. Streamflows are forecast to range from 92% to 108% of average. Mountain snowpack is 119% of average across the basin. However it is concentrated in the higher elevations with much of the low-elevation snow already gone. February's precipitation, one of the highest in the state, was 375% of normal. This brought the water year to date total to 108% of average. Reservoir storage is excellent.

For more information contact your local Soil Conservation Service office.

KLAMATH BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLEAR LAKE net Inflow	MAR-JUL	72.8	67.0	92	140	44				
GERBER RESERVOIR net Inflow	MAR-JUL	30.6	30.6	100	144	56				
SPRAGUE near Chiloquin	MAR-SEP	283.7	306.4	108	151	65				
	APR-SEP	227.7	239.1	105	147	63				
UPPER KLAMATH LAKE net Inflow	MAR-SEP	686.0	700.0	102	138	66				
	APR-SEP	502.3	502.3	100	135	65				
WILLIAMSON near Chiloquin	MAR-SEP	488.6	527.7	108	145	71				
	APR-SEP	386.8	406.1	104	137	73				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (CALIF)	513.3	383.7	375.3	224.2
GERBER	94.3	89.2	70.6	51.7
UPPER KLAMATH LAKE	523.7	472.3	383.6	407.9

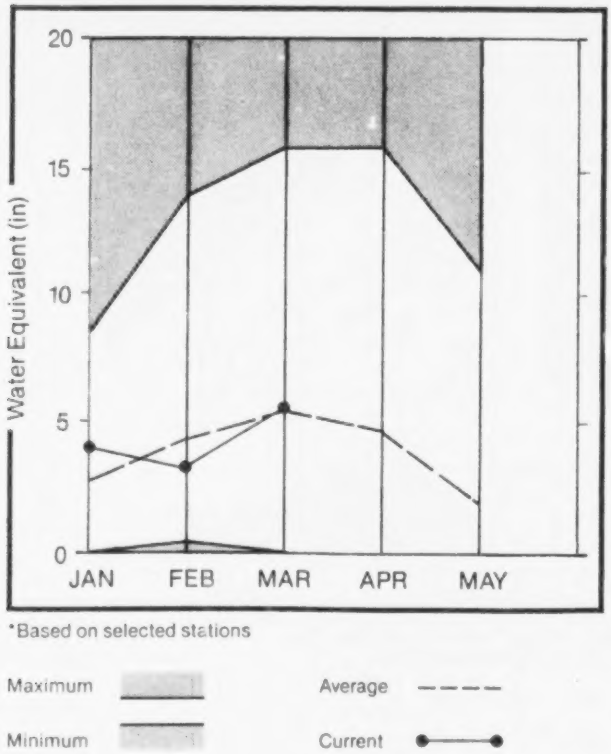
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Lost River	3	42	59
Sprague River	6	119	151
Upper Klamath Lake	17	97	123
Williamson River	5	106	121

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

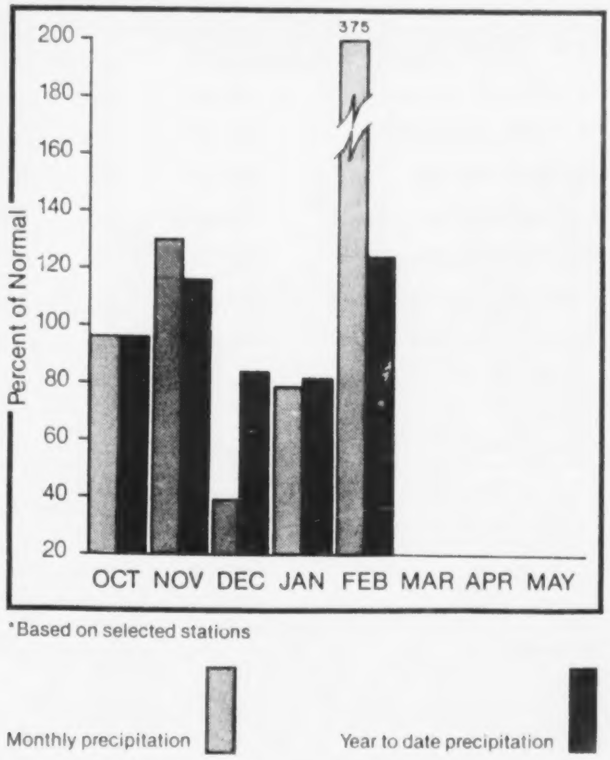
Lake County and Goose Lake Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Lake County can expect near normal amounts of water this summer. Streams are forecast to flow at 102% to 110% of normal. The snowpack across the county is 128% of normal for March 1. The warm temperatures and heavy rain (375% of normal) in late February helped to melt much of the low-elevation snow. For the October-February period the precipitation has been 124% of average. Reservoir storage in Lake County is 131% of the March 1 average.

For more information contact your local Soil Conservation Service office.

LAKE COUNTY AND GOOSE LAKE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BRIDGE CREEK at Spahr Ranch	APR-JUL	3.4	**3.7**	**108**	147	59				
CHEWAUCAN near Paisley	MAR-JUL	82.4	**86.5**	**104**	140	70				
COTTONWOOD CK near Lakeview	MAR-JUL	10.9	**11.4**	**104**	156	55				
DEEP CREEK near Adel	MAR-JUL	76.2	**81.5**	**106**	157	56				
DREWS RESERVOIR net Inflow	MAR-JUL	39.5	**40.3**	**102**	157	48				
HONEY CREEK near Plush	MAR-JUL	18.9	**20.4**	**107**	175	42				
SILVER CREEK near Silver Lake	APR-JUL	14.1	**15.5**	**109**	163	57				
TWENTYMILE near Adel	MAR-JUL	26.0	**28.6**	**110**	188	31				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COTTONWOOD	8.7	**8.7**	1.8	3.4
DREWS	63.0	**50.9**	41.1	38.6
THOMPSON VALLEY	18.4	**15.2**	13.7	14.6

WATERSHED SNOWPACK ANALYSIS

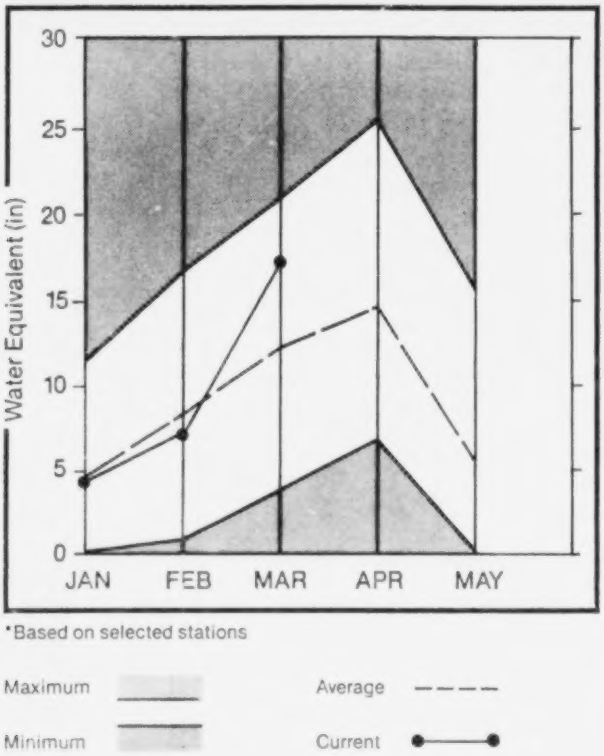
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Chewaucan River	5	103	**105**
Deep Creek	4	109	**86**
Drew Creek	4	83	**113**
Honey Creek	4	89	**118**
Silver Creek (Lake Co.)	4	80	**130**
Twentymile Creek	5	107	**98**

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

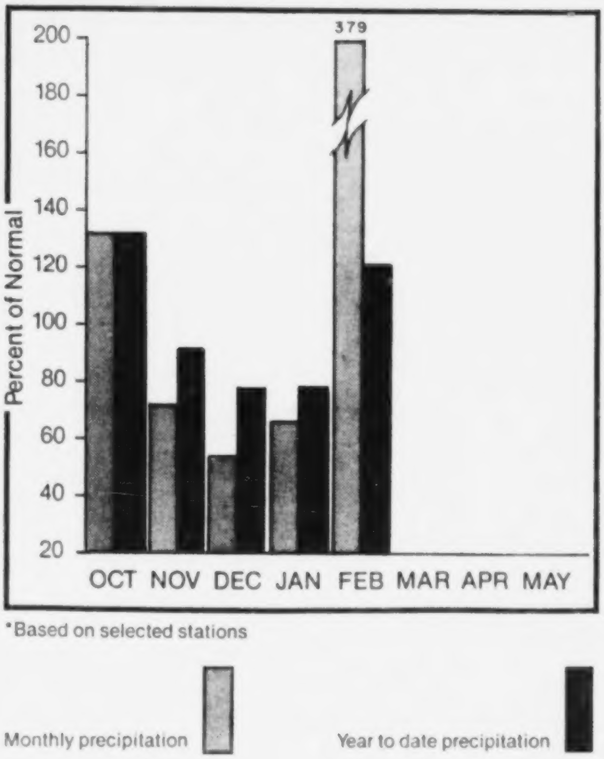
Harney Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies will be near normal in Harney County this year. Streamflows are forecast to range from 98% to 110% of average. The mountain snowpack, one of the heaviest in the state, is 138% of average across Harney basin. February's precipitation was the heaviest in Oregon at 379% of average. For the water year to date, it has been 121%. Streamflow should recede a couple of days later than normal this summer. The July 1 Malheur Lake elevation is forecast to be 4101.2 feet this year.

For more information contact your local Soil Conservation Service office.

HARNEY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
DONNER UND BLITZEN nr Frenchglen	MAR-JUL	61.8	**68.0**	**110**	155	65				
	APR-SEP	58.9	**58.9**	**100**	141	59				
SILVER CREEK near Riley	APR-JUL	15.5	**17.1**	**110**	194	26				
SILVES near Burns	MAR-JUL	96.6	**104.3**	**107**	153	63				
	APR-SEP	76.9	**75.4**	**98**	153	43				
TROUT CREEK nr Denio	MAR-JUL	9.3	**10.0**	**107**	172	43				
	APR-SEP	8.8	**8.8**	**100**	159	34				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **		
		THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF	
		LAST YR.	AVERAGE
Donner und Blitzen River	7	117	**137**
Silver Creek (Harney Co)	2	121	**126**
Silvies River	7	113	**130**
Trout Creek	3	117	**144**

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

MALHEUR LAKE ELEVATION FORECAST:

		Gage Height	Surface Acres	Avg. Surface Acres
Malheur Lake at Break in Cole Island Dike nr Voltage				
	Jul 1	4101.2	114,600	40,000
	Aug 1	4100.8	111,400	33,000

HISTORICAL DATA (COLUMBIA RIVER AT THE DALLES)

Year	STREAMFLOW (1,000 AF)			REGULATED PEAK (1,000cfs)	DATE
	APR-SEP	APR-JUN	MAY-JUN		
1961	101,940	76,860	66,185	699	JUN 8
1962	95,260	66,516	50,819	460	JUN 5
1963	87,860	58,499	47,812	437	JUN 18
1964	110,422	73,512	63,670	662	JUN 18
1965	114,222	80,098	62,467	520	JUN 9
1966	87,386	58,250	45,962	396	JUN 12
1967	109,319	74,378	66,452	622	JUN 10
1968	89,102	55,593	47,994	404	JUN 13
1969	112,377	85,742	63,899	515	MAY 15
1970	88,243	62,993	55,227	425	MAY 28
1971	126,898	91,781	76,453	557	MAY 13
1972	135,500	97,041	81,451	619	JUN 20
1973	65,549	43,765	36,565	221	DEC 5
1974	139,501	99,035	78,946	588	JUN 20
1975	108,906	73,018	62,861	422	MAY 17
1976	122,771	79,084	62,554	418	MAY 14
1977	54,108	35,505	28,394	213	JAN 25
1978	100,968	67,287	52,035	313	JUN 10
1979	76,700	54,900	44,984	311	MAY 25
1980	91,631	68,229	53,704	345	JUN 18
1961-80 AVG	100,933	70,104	57,422	457	

LOWER COLUMBIA RIVER FLOOD STAGES (WITH 9.5' TIDE AT ASTORIA)

VANCOUVER GAGE (NWS)	FLOW AT THE DALLES (1,000 cfs)	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

Forecast Date of Low Flow Values

	Forecast Point	Low Flow Value Second/Ft	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
OWYHEE AND MALHEUR BASINS	Owyhee nr Rome	2000	May 17	May 14
		1000	May 30	May 28
		500	Jun 14	Jun 11
BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS	Eagle Ck above Skull Ck	225	Jul 25	Jul 25
		160	Aug 5	Aug 5
	Catherine Ck near Union	50	Aug 1	Avg Value 49
		100	Jul 9	Jul 9
		50	Jul 28	Jul 28
	Powder near Sumpter	100	Jun 27	Jun 25
		20	Jul 24	Jul 22
	Deer Ck ab Phillips Resv nr Sumpter	40	Jun 19	Jun 17
		10	Jul 8	Jul 6
UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS	Umatilla at Pendleton	550	May 17	May 17
	SF Walla Walla nr Milton	200	Jun 8	Jun 9
		99	Aug-Sep Min Flow	Avg Value 105
UPPER JOHN DAY BASIN	John Day at Service Ck	210	Aug 1	Avg Value 212
UPPER DESCHUTES AND CROOKED BASINS	Crane Prairie Net Inflow	410	Peak	
		85	Oct 31	
		Peak	Jun 4	
	Crooked R nr Post	100	Jun 4	Jun 1
	Deschutes blw Bend	1500	Jul 7	Jul 1
	Little Deschutes nr LaPine	400	Jun 8	Jun 7
		200	Jul 9	Jul 8
	Squaw Ck nr Sisters	100	Aug 18	Aug 16
	Tumalo Ck nr Bend	235	Jun 26	Jun 23
		207	Jun 28	Jun 25
		150	Jul 9	Jul 5
		71	Aug 11	Aug 7

Forecast Date of Low Flow Values

	Forecast Point	Low Flow Value Second/Ft	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS	Clear Branch Inflow	* 40	Jul 15-31	**39
	White bl Tygh Valley	200	Jul 5	Jul 3
		147	Aug 1	Avg Value 145
ROGUE AND UMPQUA BASINS	Cow Ck nr Azalea	20	Jul 3	Jul 4
		10	Aug 17	Aug 19
	Little Butte Ck SF	100	May 12	May 15
	South Umpqua nr Brockway	90	Jul 28	Jul 30
	South Umpqua at Tiller	140	Jul 8	Jul 10
		90	Jul 28	Jul 30
		60	Aug 25	Aug 27
LAKE COUNTY AND GOOSE LAKE BASINS	Deep Ck above Adel	100	Jun 22	Jun 21
	Honey Ck near Plush	100	May 16	May 15
		50	May 31	May 30
	Twentymile near Adel	50	Jun 4	Jun 2
		10	Jul 5	Jul 3
HARNEY BASIN	Silvies near Burns	400	May 7	May 5
		200	May 23	May 21
		100	Jun 10	Jun 9
		50	Jun 24	Jun 23
	Donner und Blitzen	200	Jun 17	Jun 15
		100	Jul 7	Jul 5

* Average cfs forecast to flow for this two-week period.

** Average cfs for period of record.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State

- Oregon Department of Water Resources
- Oregon State University
- Soil and Water Conservation Districts of Oregon

Federal

- U.S. Department of Agriculture
    - Extension Service
    - Forest Service
- U.S. Department of Army
    - Corps of Engineers
- U.S. Department of Commerce
    - NOAA, National Weather Service
- U.S. Department of Energy
    - Bonneville Power Administration
- U.S. Department of the Interior
    - Bureau of Land Management
    - Bureau of Reclamation
    - Fish and Wildlife Service
    - Geological Survey

Local

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- City of Baker
- City of La Grande
- City of Portland
- City of The Dalles
- City of Walla Walla
- Douglas County Water Resources Survey
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control – Owyhee Project
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control – Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale – Oregon Irrigation District
- Warmsprings Irrigation District

Private

- Pacific Power and Light Company
- Portland General Electric Company
- The Crag Rats, Hood River, Oregon

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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Conservation
Service

Portland,
Oregon

Oregon Water Supply Outlook

April 1, 1986

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Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Oregon Water Supply Outlook

and

Federal – State – Private Cooperative Snow Surveys

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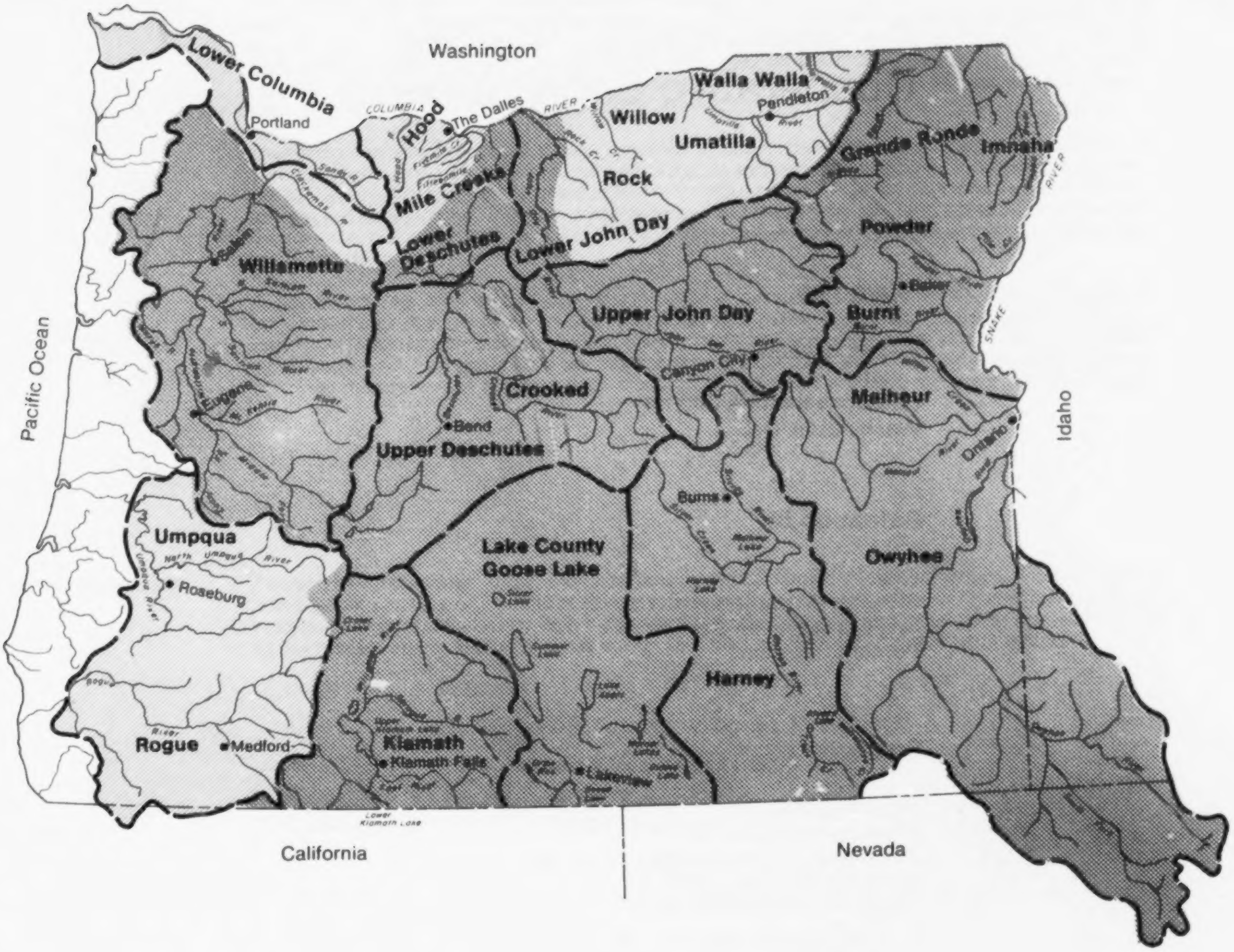
Streamflow Prospects for Oregon

Spring and Summer Period



Streamflow Prospects

▨ Much above average: (>130%)

▨ Above average: (110-130%)

▨ Near average: (90-110%)

▨ Below average: (70-90%)

▨ Much below average: (<70%)

☐ Not forecast

GENERAL OUTLOOK

SUMMARY:

WATER SUPPLIES ARE FORECAST TO BE NEAR NORMAL FOR MOST OF OREGON THIS SPRING AND SUMMER. THE APRIL 1 SNOWPACK IS GENERALLY BELOW NORMAL. PRECIPITATION DURING MARCH HAS ALSO BEEN BELOW NORMAL. RESERVOIR STORAGE IS VERY GOOD.

SNOWPACK:

The snowpack begins poor in western Oregon and gets much better as you go east. It is much below average west of the Cascades and in the Umatilla area. Central Oregon has a below average snowpack, while eastern Oregon is near normal. It ranges from 49% of average in the Umatilla basin to 106% in Harney County.

PRECIPITATION:

March precipitation has been below average in the western half of Oregon, while in the eastern half it has been near to much above average. West of the Cascades it ranged from 65 to 81% of average. In the Deschutes basin, it was 85%. Near average amounts were observed elsewhere except in Lake (150%) and Harney (145%) Counties. For the water year to date (October-March), the precipitation has been near normal for all of Oregon except the southeast corner where it has been above normal (125%).

RESERVOIRS:

Twenty-nine principal irrigation reservoirs currently contain 3,060,300 acre feet of stored water. This is 124% of the April 1 average and 93% of usable capacity.

STREAMFLOW:

Streamflow during March was generally two to three times normal east of the Cascades and near normal on the west side. The Rogue River is the only exception with a March flow of 130 percent of normal.

Prospective streamflow as percent of average on representative Oregon streams is as follows:

STREAM	PERIOD	% OF AVERAGE
OWYHEE NET INFLOW	APR-SEP	98%
GRANDE RONDE AT LAGRANDE	APR-SEP	89%
UMATILLA AT PENDLETON	APR-SEP	82%
DESCHUTES AT BENHAM FALLS	APR-SEP	94%
WILLAMETTE MF NR OAKRIDGE	APR-SEP	94%
ROGUE AT RAYGOLD	APR-SEP	85%
UPP. KLAMATH LK NET INFLOW	APR-SEP	100%
SILVIES NEAR BURNS	APR-SEP	99%

Malheur Lake in Harney County has surpassed last year's record high peak. It is currently at 4102.52 feet (0.05 feet higher than last year). This is due to the early melting of the large snowpack and heavy precipitation during February and March. The July 1 forecast is for an elevation of 4101.40 and a surface area of 116,200 acres.

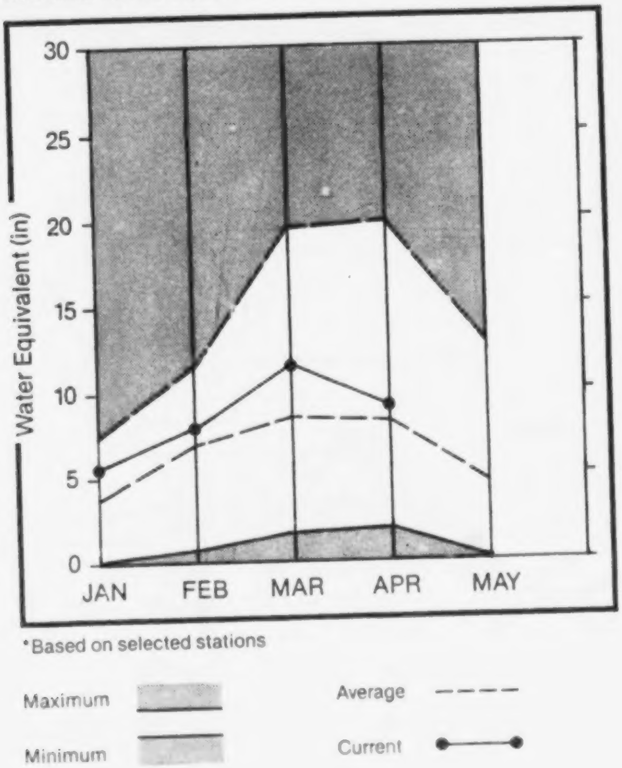
These forecasts assume normal weather conditions will occur throughout the forecast period.

The forecasts in this bulletin are a result of coordinated activity between the Soil Conservation Service and the National Weather Service in an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA, National Weather Service and other cooperators.

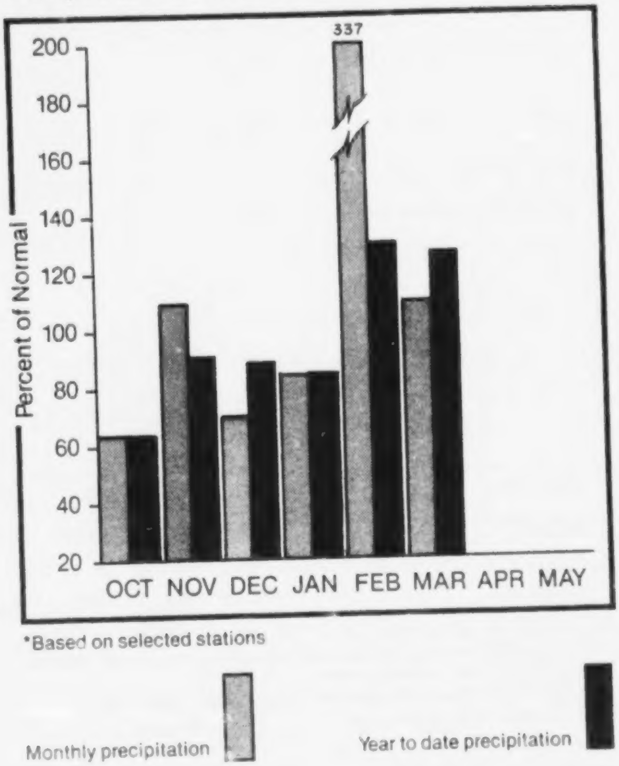
Owyhee and Malheur Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Malheur County should have near normal water supplies this spring and summer. Streamflows should range from 96% to 100% of average. The snowpack is 102% of average. March precipitation was 110% of normal and for the winter season it has been 127%. Reservoir storage is excellent with all reservoirs near their usable capacity. The inflow to Owyhee Reservoir continued to be very high (339% of normal during March).

For more information contact your local Soil Conservation Service office.

OWYHEE AND MALHEUR BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BULLY CREEK at Warmsprings	MAR-MAY	14.4	14.1	97	167	28				
MALHEUR near Drewsey	APR-JUL	67.9	65.2	96	133	60				
	APR-SEP	69.6	66.8	95	136	56				
MALHEUR, NORTH FORK at Beulah	APR-JUL	57.3	57.3	100	141	59				
	APR-SEP	62.8	62.8	100	135	64				
OWYHEE RESERVOIR net Inflow	APR-JUL	349.2	342.2	97	137	59				
	APR-SEP	376.1	368.6	98	135	61				
OWYHEE at Rome	APR-JUL	375.9	368.4	98	143	53				
SUCCOR CREEK nr Jordan Valley	APR-JUL	9.6	9.6	100	146	52				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BEULAH RES	60.0	60.2	55.8	42.9
BULLY CREEK	30.0	27.3	26.6	24.2
OWYHEE	715.0	706.1	621.3	560.8
WARMSPRINGS	191.0	174.1	167.0	119.5

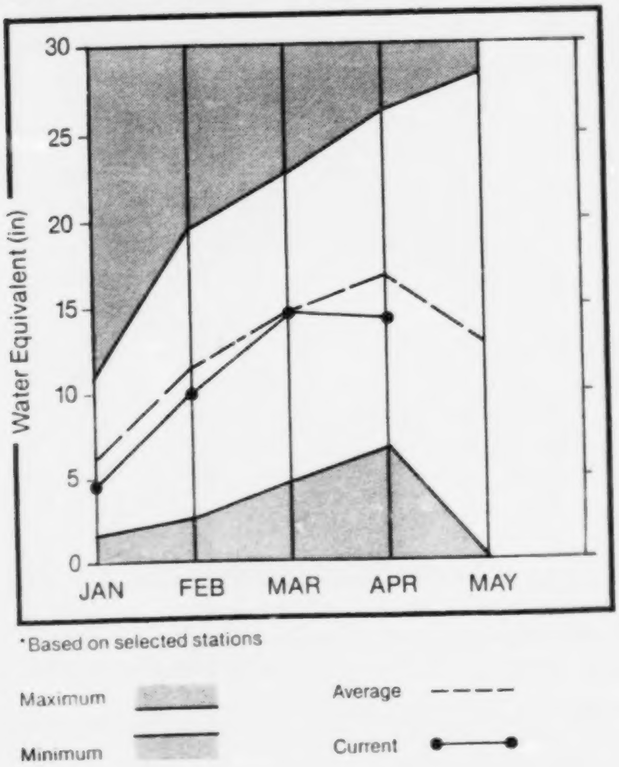
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Owyhee River	17	78	101
Malheur	9	66	74
Jordan Creek	2	94	131
Bully Creek	2	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

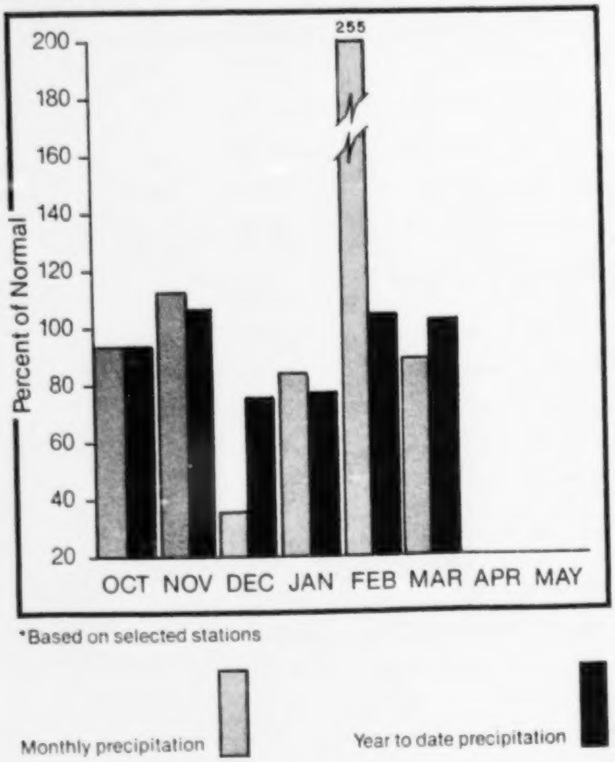
Burnt, Powder, Grande Ronde, and Imnaha Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows in the northeast corner of Oregon are forecast to range from 89% to 113% of normal this summer. For the entire area, the snowpack is normal for this time of year. The lower elevation snow is below average while the higher elevation snowpack is near average. Precipitation during March was 89% of average and 101% for the water year to date. Reservoir storage is very good with most already full. Streaflow for the Grande Ronde River remained high during March with a 262% of average recorded.

For more information contact your local Soil Conservation Service office.

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
ANTHONY CREEK blw NF nr Powder	APR-JUL	15.5	16.3	105	135	77				
BEAR CREEK near Wallowa	APR-SEP	65.6	65.6	99	123	78				
BIG CREEK blw Burn Ck	APR-JUL	10.1	10.1	100	129	69				
BURNT near Hereford	APR-JUL	32.9	33.2	100	137	64				
	APR-SEP	34.3	34.3	100	140	58				
CATHERINE CK near Union	APR-SEP	63.7	62.4	97	122	72				
DEER CK near Sumpter	APR-JUL	14.8	15.2	102	135	68				
EAGLE CK above Skull Ck	APR-JUL	168.9	168.9	100	118	82				
	APR-SEP	184.2	184.2	100	110	90				
GRANDE RONDE at La Grande	APR-JUL	157.7	141.9	89	121	59				
	APR-SEP	161.9	145.7	89	130	50				
HURRICANE CK near Joseph	APR-SEP	45.8	42.9	93	114	74				
IMNAHA at Imnaha	APR-SEP	300.7	276.6	91	119	65				
LOSTINE near Lostine	APR-SEP	122.9	109.8	89	105	73				
PINE CREEK near Oxbow	APR-JUL	180.0	165.1	91	122	62				
POWDER near Sumpter	APR-JUL	55.7	57.4	103	135	72				
	APR-SEP	56.8	58.5	102	136	70				
EAST FORK WALLOWA near Joseph	APR-JUL	8.9	9.2	103	124	79				
	APR-SEP	11.1	11.4	102	126	81				
WALLOWA at Joseph	APR-JUL	71.6	73.8	103	148	59				
WOLF CK RESERVOIR net Inflow	APR-JUN	12.4	13.0	104	153	56				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
PHILLIPS LAKE	73.5	70.3	64.5	33.9
THIEF VALLEY	17.4	18.1	---	16.5
UNITY	25.2	25.1	18.1	20.0
WALLOWA LAKE	37.5	22.4	16.6	22.7
WOLF CREEK	10.4	10.7	4.9	---

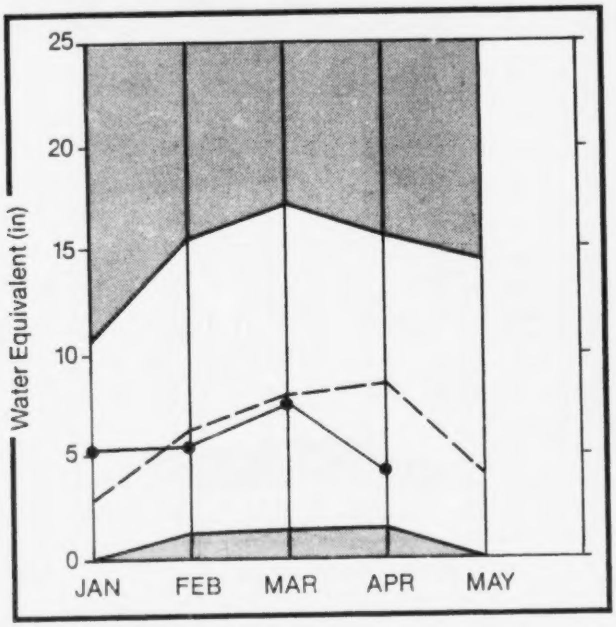
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Grande Ronde ab LaGrande	6	63	78
Powder River	8	91	103
Wallowa,Imnaha,Catherine	10	105	104
Burnt River	5	74	80

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

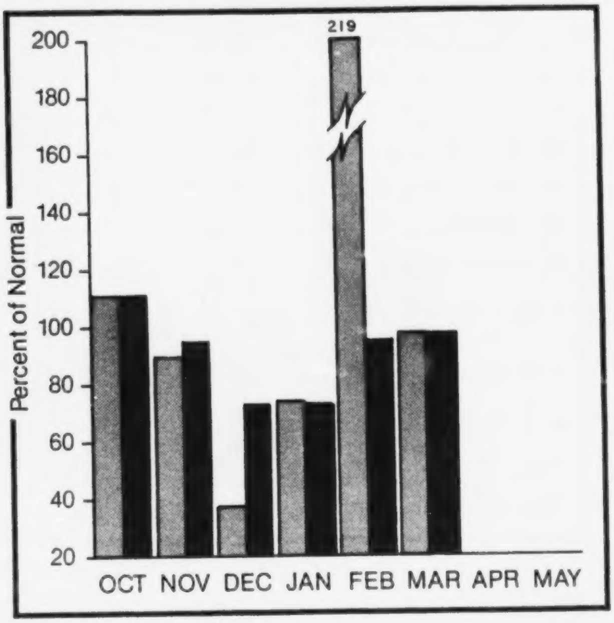
Umatilla, Walla Walla, Willow, Rock, and Lower John Day Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies are forecast to be below normal this summer. Streamflows should range from 78% to 90% of normal. The snowpack, which is the lowest in the state, is only 49% of average. March precipitation was 97% of normal and for the water year to date it has been 96%. McKay Reservoir currently contains 138% of normal water amounts and Cold Springs Reservoir contains 70% of normal amounts.

For more information contact your local Soil Conservation Service office.

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BUTTER CK NEAR PINE CITY	APR-JUL	7.8	7.0	89	141	38				
COUSE CK nr Milton Freewater	APR-JUL	3.6	3.2	89	111	56				
MCKAY near Pilot Rock	APR-SEP	23.8	19.0	79	134	25				
PINE CREEK near Weston	APR-JUL	2.7	2.3	85	111	37				
RHEA CREEK near Heppner	APR-JUL	4.7	3.8	81	106	43				
ROCK CREEK above Cayuse Canyon	APR-JUL	8.3	7.5	90	120	60				
UMATILLA near Gibbon	APR-JUL	70.6	56.5	80	109	51				
	APR-SEP	76.7	61.4	80	106	55				
UMATILLA near Pendleton	APR-JUL	141.4	116.0	82	113	51				
	APR-SEP	146.9	120.5	82	114	50				
SF WALLA WALLA nr MiltonFreewater	APR-JUL	54.0	43.0	79	96	63				
	APR-SEP	67.0	52.3	78	94	63				
WILLOW CREEK near Heppner	APR-JUL	5.6	5.0	90	125	54				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COLD SPRINGS	50.0	33.2	36.4	47.2
MCKAY	73.8	67.8	57.3	49.3
WILLOW CREEK	1.8	1.8	---	---

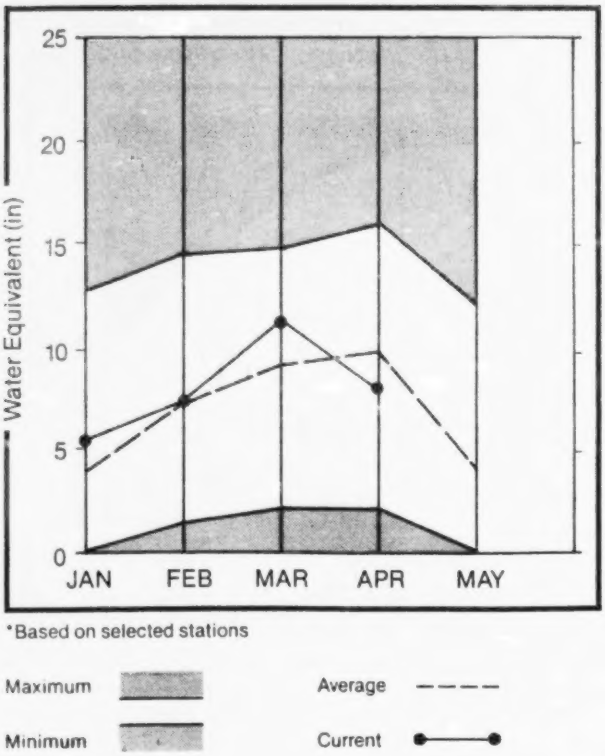
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Walla Walla River	1	42	62
Umatilla River	5	36	49
McKay Creek	3	30	40

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

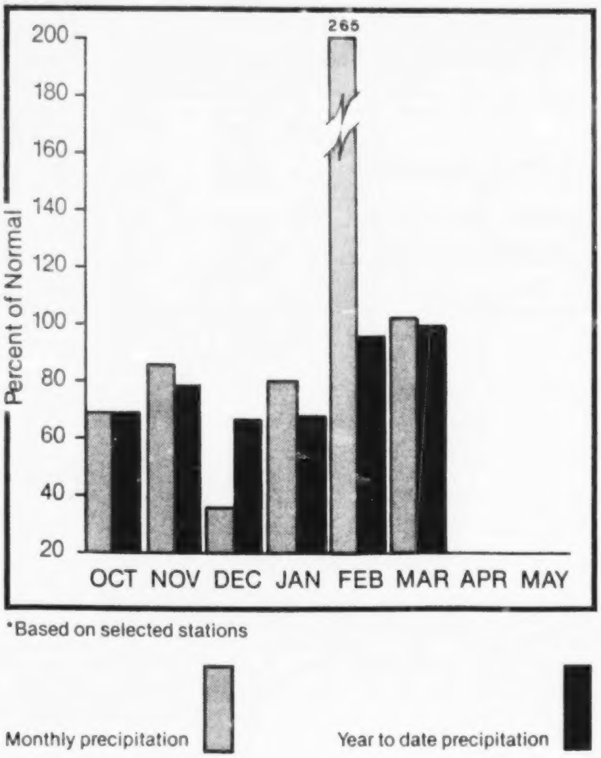
Upper John Day Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

The streamflow in the Upper John Day area is forecast to be near normal this summer. It ranges from 88% to 97%. The snowpack is 84% of normal. Precipitation during March was 101% of average and for the October-March period it has been 97%. John Day streamflow during March was 273% of average.

For more information contact your local Soil Conservation Service office.

UPPER JOHN DAY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CAMAS CREEK nr Ukiah	APR-JUL	33.6	30.9	91	146	39				
	APR-SEP	34.2	31.4	91	135	50				
NF JOHN DAY at Ritter	APR-JUL	107.0	97.4	91	117	65				
	APR-SEP	111.0	100.0	90	116	64				
NF JOHN DAY at Monument	APR-JUL	533.8	523.1	97	124	72				
	APR-SEP	549.4	538.4	97	125	71				
MOUNTAIN CREEK near Mitchell	APR-JUL	3.6	3.2	88	111	56				
STRAWBERRY CREEK nr Prairie City	APR-JUL	7.1	6.7	95	127	70				
	APR-SEP	7.8	7.4	94	128	64				

RESERVOIR STORAGE (1000AF)

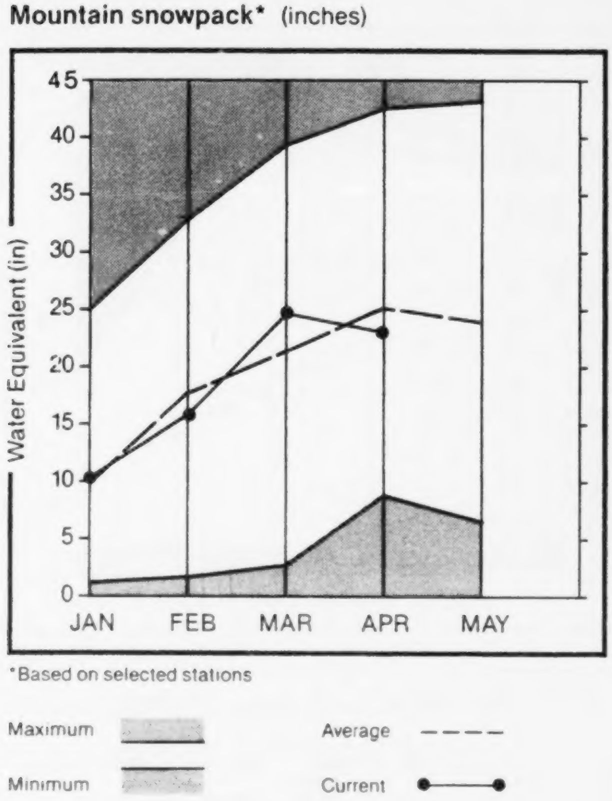
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
John Day, North Fork	8	83	88
John Day above Dayville	8	84	95

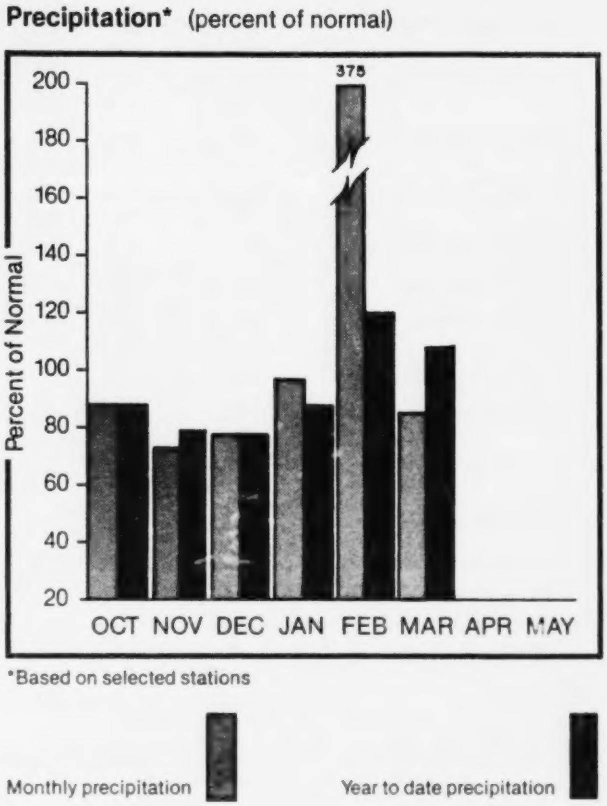
*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

Upper Deschutes and Crooked Basins



Mountain snowpack* (inches)

*Based on selected stations



Precipitation* (percent of normal)

*Based on selected stations

WATER SUPPLY OUTLOOK:

Spring and summer water supplies should be near normal this year. Streamflows should range from 87% to 98% of normal. The lower elevation snowpack is much below average while the high elevation snow is near average. March precipitation was 85% of normal and for the winter season it has been 108%. Reservoirs are nearly full which is unusual for this time of year. Deschutes streamflow during March was 177% of normal.

For more information contact your local Soil Conservation Service office.

UPPER DESCHUTES AND CROOKED BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BEAVER CREEK nr Paulina	APR-JUL	16.7	15.9	95	126	66				
	APR-SEP	16.8	16.0	95	125	65				
CRANE PRAIRIE RES net Inflow	APR-JUL	75.9	74.4	98	134	62				
	APR-SEP	113.2	110.9	97	134	62				
CRESCENT CK nr Crescent Lake	APR-JUL	16.2	15.4	95	117	74				
	APR-SEP	19.9	19.0	95	131	60				
CROOKED nr Prineville	APR-JUL	93.5	84.1	89	142	37				
	APR-SEP	93.9	84.3	89	142	38				
NF CROOKED blw Lookout Ck	ARP-JUL	9.8	8.6	87	122	61				
DESCHUTES below Bend	AUG-SEP	174.0	162.8	94	122	72				
DESCHUTES at Benham Falls	APR-JUL	352.9	335.3	95	114	76				
	APR-SEP	539.9	512.9	94	114	76				
DESCHUTES below Snow Creek	APR-SEP	59.3	58.1	97	126	69				
LITTLE DESCHUTES nr Lapine	APR-JUL	67.8	63.7	93	122	65				
	APR-SEP	77.3	72.7	94	116	72				
OCHOCO RESERVOIR net Inflow	APR-JUL	17.5	16.6	94	166	23				
	APR-SEP	17.7	16.8	94	158	34				
SQUAW CREEK nr Sisters	APR-SEP	47.7	46.8	98	117	80				
TUMALO CREEK near Bend	APR-SEP	44.3	42.5	95	111	81				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CRANE PRAIRE	55.3	53.7	48.7	45.7
CRESCENT LAKE	86.9	78.5	83.1	54.3
OCHOCO	47.5	46.7	29.3	28.0
PRINEVILLE	153.0	159.4	108.2	128.6
WICKIUP	200.0	199.8	198.6	189.3

WATERSHED SNOWPACK ANALYSIS

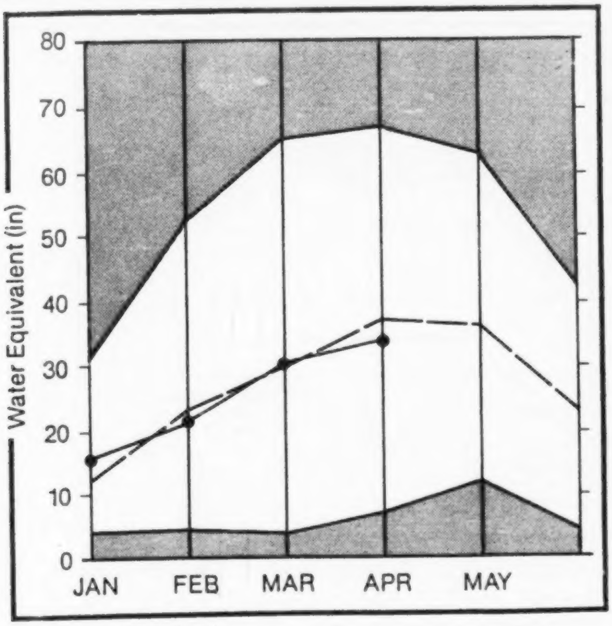
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Crooked, Ochoco	4	56	80
Deschutes above Wickiup	3	77	92
Little Deschutes	4	77	92
Tumalo and Squaw Creeks	5	74	88

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

Hood, Mile Creeks, and Lower Deschutes Basins

Mountain snowpack* (inches)



*Based on selected stations

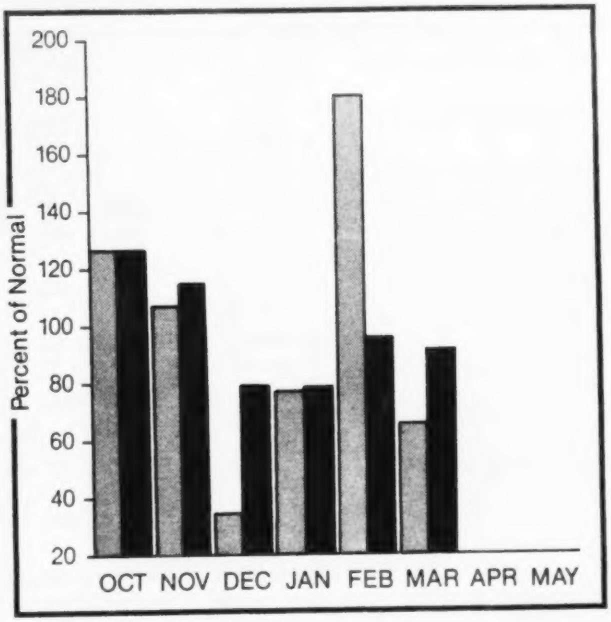
Maximum ▨

Minimum ▨

Average ----

Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▯

Year to date precipitation ■

WATER SUPPLY OUTLOOK:

Summer streamflows are forecast to range from 87% to 90% of average. The warm temperatures during March caused much of the lower elevation snow to melt leaving a snowpack which is below average (83%). March precipitation was the lowest in the state at 65% of normal. For the October-March period it is also the lowest in the state at 91% of average. Reservoir storage at Clear Lake is 159% of average.

For more information contact your local Soil Conservation Service office.

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
HOOD RIVER near Tucker Bridge	APR-JUL	238.2	210.0	88	105	71				
	APR-SEP	285.3	251.0	87	104	72				
WEST FORK HOOD RIVER nr Dee	APR-JUL	124.9	112.4	89	114	66				
	APR-SEP	146.4	131.8	90	111	69				
WHITE RIVER below Tygh Valley	APR-JUL	112.5	99.0	88	107	69				
	APR-SEP	127.5	112.2	88	110	66				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (WASCO)	11.9	8.1	6.9	5.1

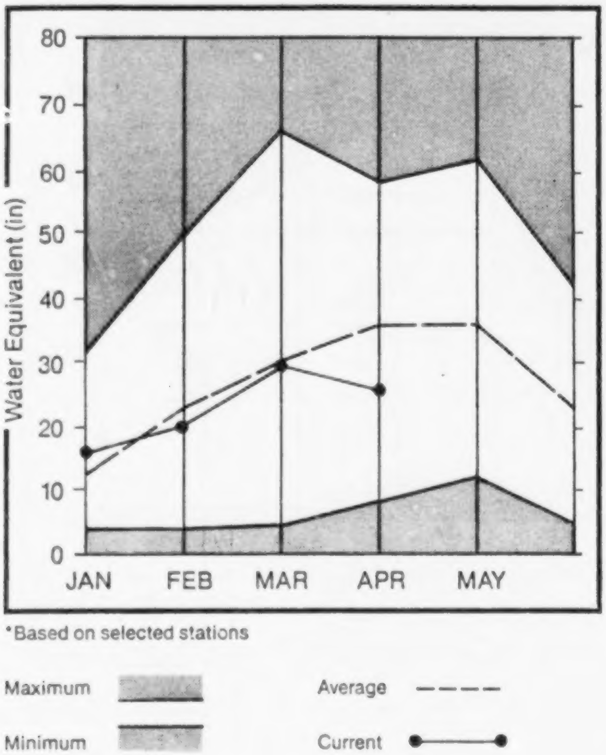
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Hood River	6	60	71
Mile Creeks	1	46	74
White River	3	52	77

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

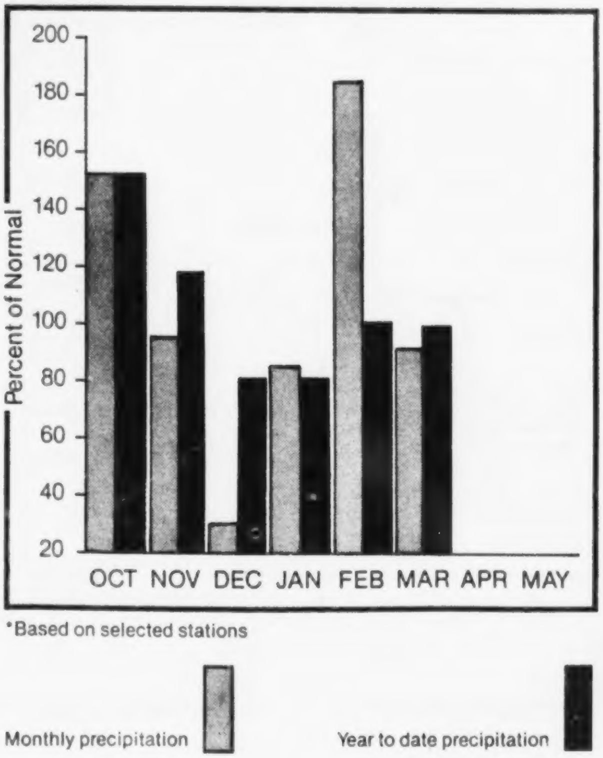
Lower Columbia Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be below normal (88%) this summer for the Columbia River at The Dalles. The Sandy River should flow at 85% of average. The snowpack for the entire Columbia River Basin is 83% of normal. Precipitation during March was 92% of normal and for the water year to date it has been 99%.

For more information contact your local Soil Conservation Service office.

LOWER COLUMBIA BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COLUMBIA at The Dalles	APR-JUL	86500.0	75700.0	87	103	73				
	APR-SEP	101000.0	89700.0	89	104	74				
SANDY RIVER near Marmot	APR-JUL	327.1	270.6	83	98	68				
	APR-SEP	380.8	323.9	85	98	72				

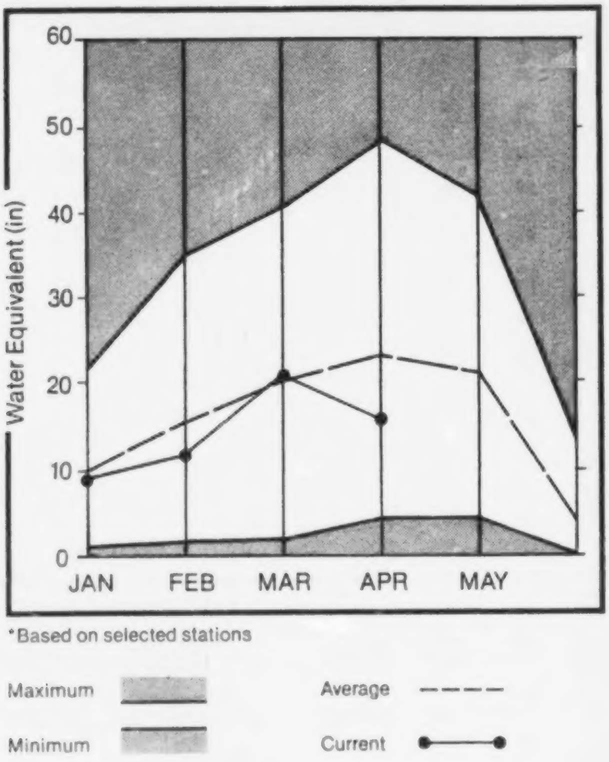
RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.	WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
					Sandy River	3	52	77

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Page 29 for Historical Data and Flood Stages.

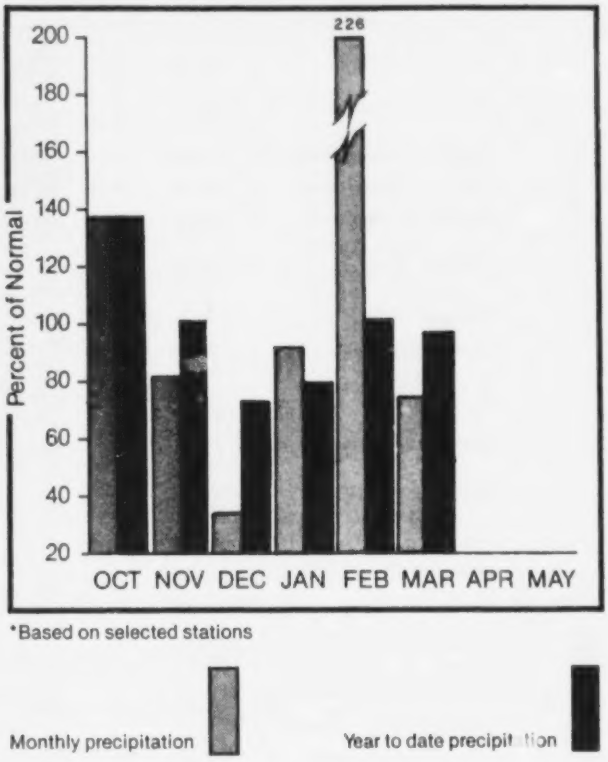
Willamette Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

The Willamette Valley should have near normal water supplies this summer. The streamflows are forecast to range from 87% to 97% of normal. The snowpack is only 59% of the April 1 average. This is one of the lowest in the state. Warm temperatures have melted snow at most all lower elevations and some of the higher elevations. March precipitation was only 75% of normal while for the October-March period it has been 98%.

For more information contact your local Soil Conservation Service office.

WILLAMETTE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLACKAMAS at Estacada	APR-JUL	652.0	[illegible]	90	107	73				
	APR-SEP	764.0	[illegible]	[illegible]	108	72				
CLACKAMAS above Three Lynx	APR-JUL	494.9	[illegible]	[illegible]	106	74				
	APR-SEP	587.3	[illegible]	[illegible]	105	75				
MCKENZIE AT McKenzie Bridge	APR-JUL	440.4	410.0	93	106	80				
MCKENZIE at McKenzie Bridge	APR-SEP	584.9	[illegible]	93	106	80				
MCKENZIE near Vida	APR-JUL	994.3	[illegible]	[illegible]	109	71				
	APR-SEP	1222.9	[illegible]	[illegible]	108	70				
SF MCKENZIE at Rainbow	APR-JUL	201.9	[illegible]	92	110	74				
	APR-SEP	228.9	210.6	92	107	77				
MOHAWK near Springfield	APR-JUL	63.7	60.3	[illegible]	126	64				
OAK GROVE FORK ab Power Intake	APR-JUL	131.4	115.6	87	111	65				
	APR-SEP	167.3	147.2	87	109	67				
ROW near Dorena	APR-JUL	98.6	88.7	89	135	45				
	APR-SEP	104.4	94.0	90	133	47				
NORTH SANTIAM at Mehama	APR-JUL	731.2	666.6	91	114	68				
	APR-SEP	838.1	772.8	92	114	70				
SOUTH SANTIAM at Waterloo	APR-JUL	534.4	481.0	90	124	56				
	APR-SEP	577.7	520.0	90	123	57				
SCOGGINS CREEK near Gaston	APR-JUL	13.3	12.2	91	120	60				
THOMAS CREEK nr Scio	APR-JUL	71.3	67.7	94	125	65				
COAST FORK WILLAMETTE nr London	APR-JUL	27.8	25.6	[illegible]	122	61				
MF OF WILLAMETTE bl NF nr Oakridge	APR-JUL	667.9	627.8	93	108	80				
	APR-SEP	763.8	718.0	94	107	81				
NF OF MF OF WILLAMETTE nr Oakridge	APR-JUL	182.3	167.7	91	115	69				
	APR-SEP	203.9	188.0	92	113	71				
WILLAMETTE at Salem	APR-JUL	4171.1	4046.0	97	126	68				
	APR-SEP	4655.0	4520.0	97	124	70				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BLUE RIVER **	85.5	52.3	54.7	50.2
COTTAGE GROVE **	29.8	15.4	16.0	16.3
COUGAR **	155.2	97.4	50.2	108.8
DETROIT **	300.7	203.9	113.1	161.0
DORENA **	70.5	35.2	37.7	38.5
FALL CREEK **	115.5	72.2	74.9	65.6
FERN RIDGE **	109.6	67.0	74.4	71.4
FOSTER **	29.7	9.8	15.5	10.2
GREEN PETER **	268.2	175.7	139.8	158.7
HILLS CREEK **	200.2	128.0	106.2	113.2
LOOKOUT POINT **	337.0	213.3	113.6	156.8
TIMOTHY LAKE	61.7	35.7	37.6	51.3
HENRY HAGG LAKE	53.0	50.5	46.3	47.8

WATERSHED SNOWPACK ANALYSIS

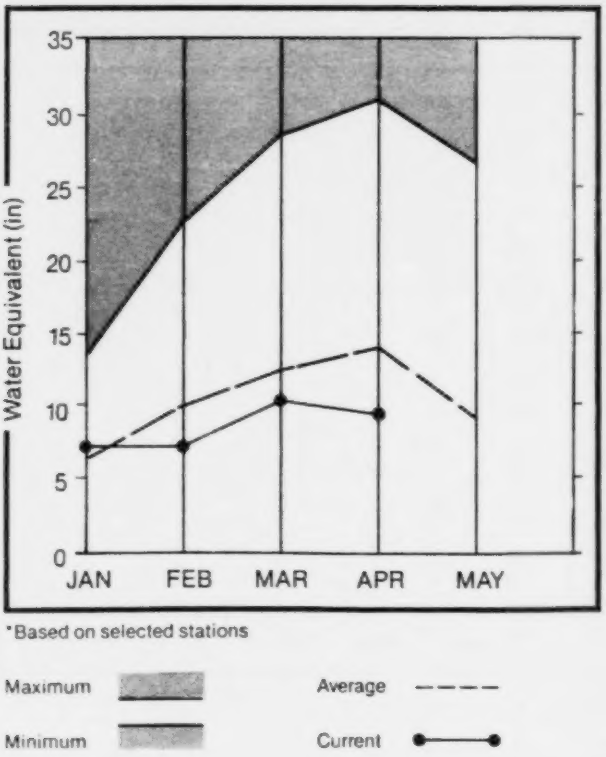
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Clackamas River	4	36	58
McKenzie River	3	59	78
Row River	0	0	0
Santiam River	5	34	33
Willamette, Middle Fork	4	60	74

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

**Multiple Purpose Reservoir...Space Reserved Primarily For Flood Control.

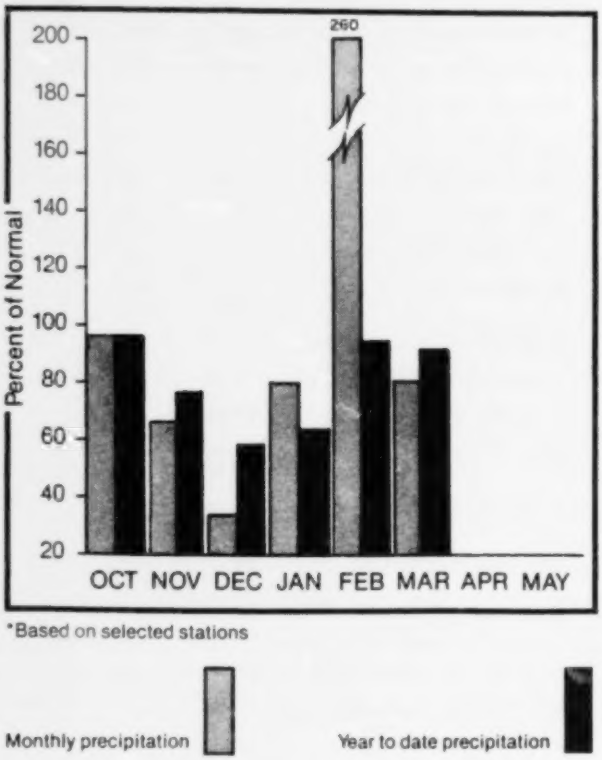
Rogue and Umpqua Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Spring and summer water supplies are forecast to be below normal this year. Streamflows should range from 79% to 85% of average. This is the lowest in the state. Most of the low elevation snow is gone and only the high elevation snow remains. For the entire area, the snowpack is 68% of normal. Precipitation during March was 81% of normal, while for the water year to date it has been 92%. Most reservoirs in the area are above average for this time of year and all should fill this year.

For more information contact your local Soil Conservation Service office.

ROGUE AND UMPQUA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
APPLEGATE nr Copper	APR-SEP	123.4	101.2	82	113	51				
SF BIG BUTTE CK near Butte Falls	APR-JUL	34.4	31.0	90	119	61				
CLEARWATER above Trap Creek	APR-SEP	68.5	63.8	93	109	76				
COW CREEK near Azalea	APR-JUL	16.9	14.3	85	112	59				
FOURMILE LAKE net Inflow	APR-SEP	3.9	3.5	90	103	103				
GRAVE CREEK at Pease Bridge	APR-JUL	7.7	6.7	88	117	52				
HYATT PRAIRIE RES net Inflow	APR-JUL	4.7	4.1	88	128	43				
ILLINOIS near Kerby	APR-JUL APR-SEP	179.6 186.7	146.4 156.5	82 83	147 142	37 42				
NF LITTLE BUTTE CK nr Lakecreek	APR-SEP	13.2	11.5	87	121	53				
SF LITTLE BUTTE CK nr Lakecreek	APR-SEP	32.1	27.0	84	115	53				
RED BLANKET CK nr Prospect	APR-JUL	33.9	29.2	86	115	56				
ROGUE RIVER ab Prospect	APR-JUL APR-SEP	244.9 299.5	203.2 248.5	83 83	99 100	67 66				
SF ROGUE near Prospect	APR-JUL APR-SEP	58.9 69.9	47.1 55.9	79 79	104 102	58 59				
ROGUE RIVER at Raygold	APR-JUL APR-SEP	721.9 879.9	613.6 750.0	84 85	107 108	63 62				
ROGUE RIVER at Grants Pass	APR-JUL APR-SEP	732.9 875.8	600.3 720.7	82 82	108 108	58 58				
SUCKER CREEK bl Little Grayback	APR-JUL	55.6	45.6	82	112	52				
NORTH UMPQUA nr Tokatee Falls	APR-SEP	163.9	134.4	82	92	72				
NORTH UMPQUA at Winchester	APR-JUL	751.1	608.4	81	106	56				
SOUTH UMPQUA at Brockway	APR-JUL	376.6	306.8	81	107	57				
SOUTH UMPQUA near Tiller	APR-JUL	180.3	147.9	82	102	62				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
APPLEGATE	75.2	50.9	35.5	---
EMIGRANT LAKE	39.0	39.0	35.6	35.9
FISH LAKE	8.0	6.9	---	5.8
FOURMILE LAKE	16.1	12.9	---	9.5
HOWARD PRAIRIE	60.0	50.6	55.1	45.1
HYATT PRAIRIE	16.1	16.0	14.1	12.7
LOST CREEK **	315.0	280.3	275.6	---

WATERSHED SNOWPACK ANALYSIS

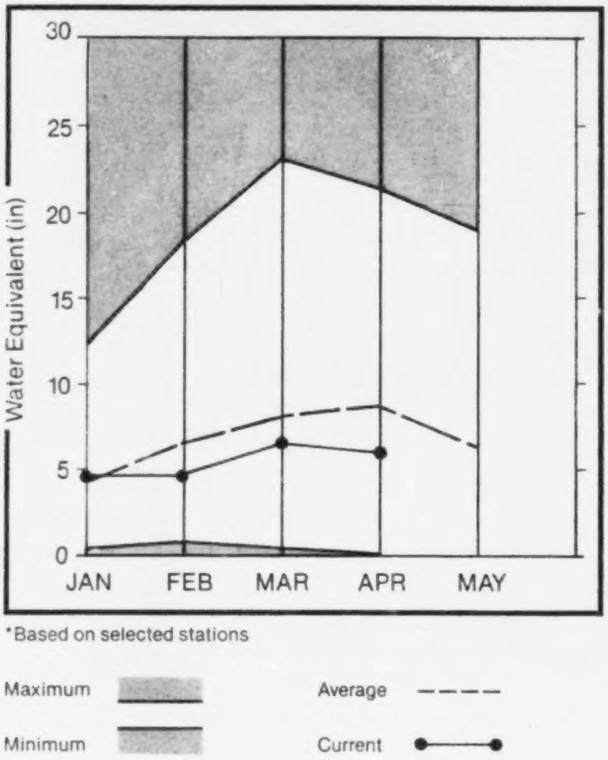
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Applegate River	5	71	82
Bear Creek	5	64	71
Butte Creek	4	25	37
Illinois River	3	29	39
North Umpqua River	10	47	55
Rogue River	22	56	73
Mt. Ashland	4	77	92

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

**Multiple Purpose Reservoir...Space Reserved Primarily For Flood Control.

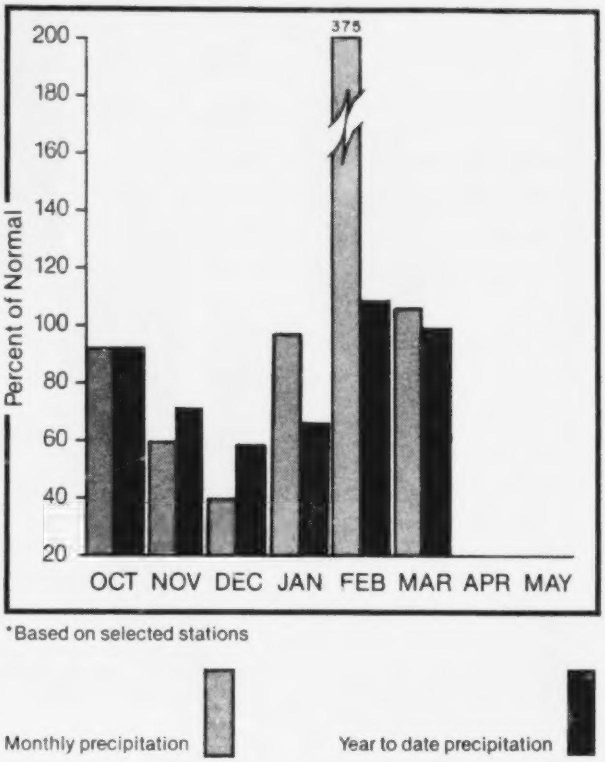
Klamath Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Klamath County should have near normal water supplies this summer. Streamflows are forecast to range from 91-100% of average. The snowpack has decreased from last month's value. It is currently 82% of the April 1 normal. Precipitation during March was 107% of normal and for the water year to date it has been 100%. Reservoirs in the area contain near normal to much above normal amounts of water. March inflow to Upper Klamath Lake was 178% of normal.

For more information contact your local Soil Conservation Service office.

KLAMATH BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLEAR LAKE net Inflow	APR-JUL	42.3	38.9	91	147	38				
	APR-SEP	45.4	41.8	92	152	33				
GERBER RESERVOIR net Inflow	APR-JUL	17.5	16.6	94	137	57				
	APR-SEP	17.9	17.0	94	151	39				
SPRAGUE near Chiloquin	APR-SEP	227.7	214.0	93	126	62				
UPPER KLAMATH LAKE net Inflow	APR-SEP	502.3	502.3	100	130	70				
WILLIAMSON near Chiloquin	APR-SEP	386.8	371.3	95	124	68				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (CALIF)	513.3	426.4	394.6	277.7
GERBER	94.3	95.0	88.5	60.0
UPPER KLAMATH LAKE	523.7	466.9	468.0	468.5

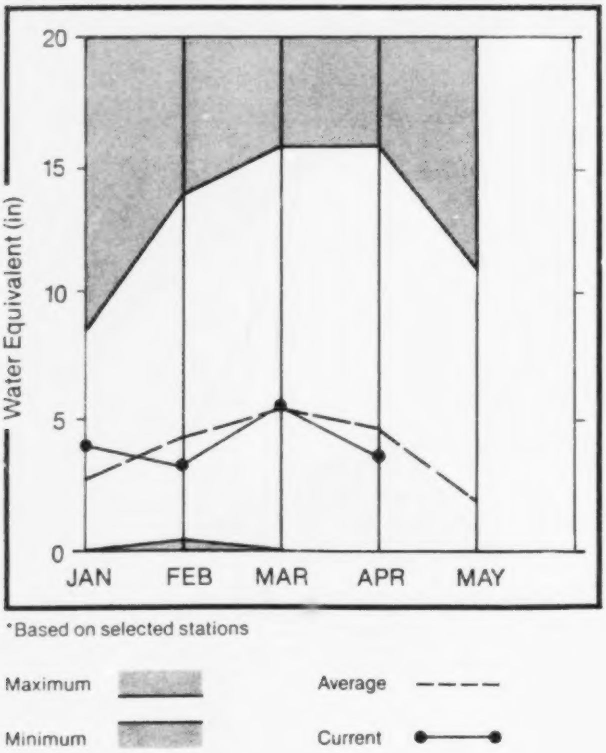
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Lost River	5	95	91
Sprague River	6	72	75
Upper Klamath Lake	17	82	93
Williamson River	5	89	93

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

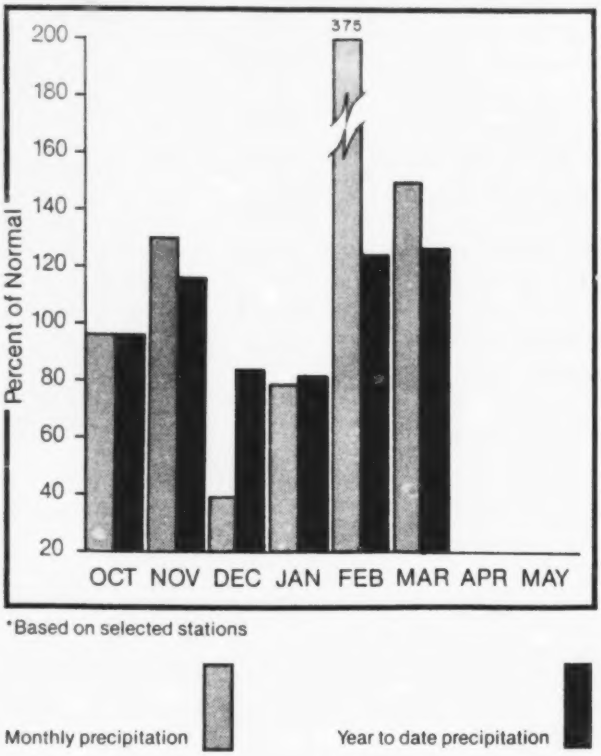
Lake County and Goose Lake Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Near normal water supplies are forecast for Lake County this spring and summer. Streamflows should range from 91% to 102% of normal. The mountain snowpack has decreased from last month's value and is currently 91% of average. March precipitation was the best in the state at 1 1/2 times normal. For the winter season, it is also the best at 127% of normal. Most reservoirs in the area are already full.

For more information contact your local Soil Conservation Service office.

LAKE COUNTY AND GOOSE LAKE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BRIDGE CREEK at Spahr Ranch	APR-JUL	3.4	3.5	102	147	59				
CHEWAUCAN near Paisley	APR-JUL	71.6	70.2	98	130	66				
	APR-SEP	75.6	74.1	98	130	66				
COTTONWOOD CK near Lakeview	APR-JUL	8.9	8.8	98	146	45				
DEEP CREEK near Adel	APR-JUL	64.1	64.1	99	142	58				
	APP-SEP	66.0	66.0	100	141	59				
DREWS RESERVOIR net Inflow	APR-JUL	25.9	23.8	91	151	35				
HONEY CREEK near Plush	APR-JUL	16.4	16.0	97	159	37				
	APR-SEP	16.5	16.1	97	158	36				
SILVER CREEK near Silver Lake	APR-JUL	14.1	13.0	92	142	43				
TWENTYMILE near Adel	APR-JUL	17.8	17.4	97	180	17				
	APR-SEP	18.3	17.9	97	164	33				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COTTONWOOD	8.7	8.7	2.6	4.8
DREWS	63.0	62.5	49.4	46.3
THOMPSON VALLEY	18.4	18.4	15.3	15.4

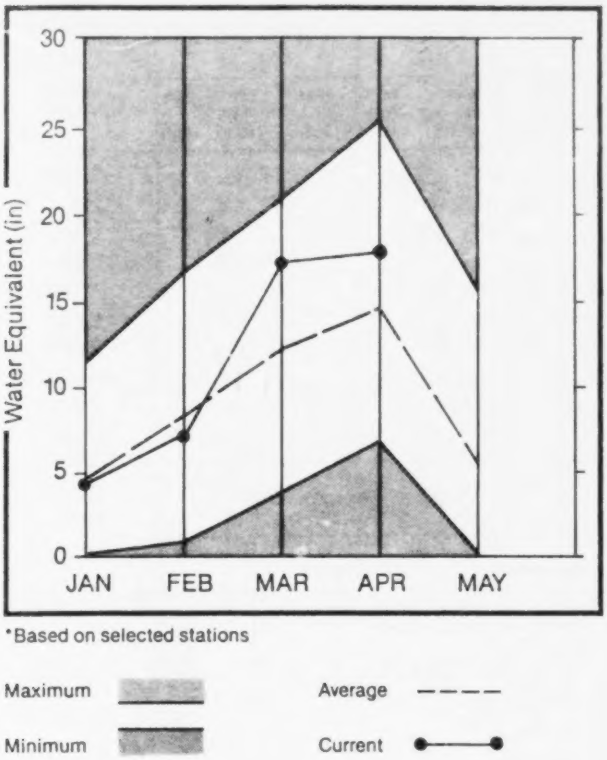
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Chewaucan River	5	85	92
Deep Creek	6	98	112
Drew Creek	5	55	52
Honey Creek	4	83	96
Silver Creek (Lake Co.)	4	52	63
Twentvmile Creek	5	99	112

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

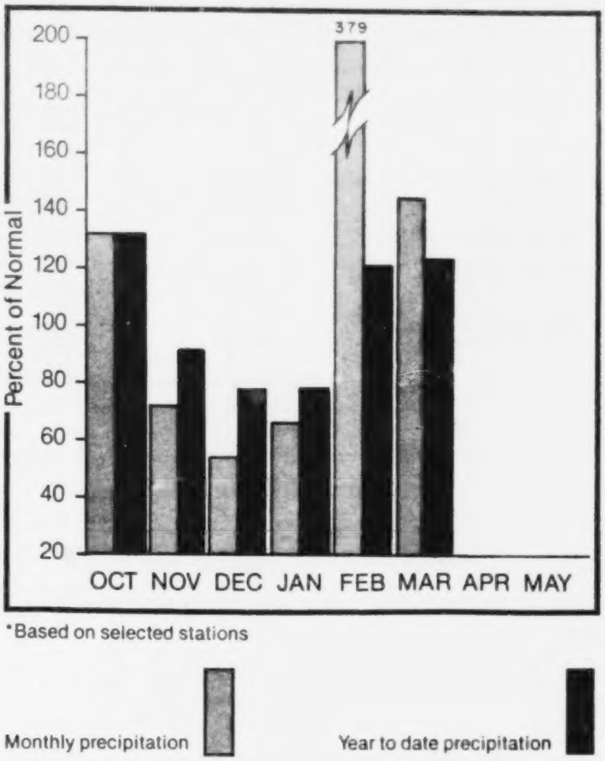
Harney Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies should be near normal this summer in Harney County. Streamflows are forecast to range from 94% to 100% of average. The snowpack is the highest in the state with the basin total being 106% of normal. March precipitation has been 145% of average and for the water year to date it has been 124%. Malheur Lake elevation is currently at 4102.52 feet which is another record. Last year it peaked at 4102.45 feet. The July 1 forecast is for an elevation of 4101.40 feet and a surface area of 116,200 acres.

For more information contact your local Soil Conservation Service office.

HARNEY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
DONNER UND BLITZEN nr Frenchglen	APR-JUL	53.9	50.7	94	130	58				
	APR-SEP	58.9	55.4	94	126	63				
SILVER CREEK near Riley	APR-JUL	15.5	15.5	100	148	52				
SILVES near Burns	APR-JUL	75.1	73.6	98	140	56				
	APR-SEP	76.9	76.0	98	148	49				
TROUT CREEK nr Denio	APR-JUL	8.2	7.9	96	146	49				
	APR-SEP	8.8	8.3	94	148	45				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Donner und Blitzen River	7	82	105
Silver Creek (Harney Co)	2	78	96
Silvies River	7	78	92
Trout Creek	4	64	84

MALHEUR LAKE ELEVATION FORECAST:

		Gage Height	Surface Acres	Avg. Surface Acres
Malheur Lake at Break in Cole	Jul 1	4101.40	116,200	40,000
Island Dike nr Voltage	Aug 1	4101.00	113,000	33,000

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for forecast Date of Low Flow Values.

HISTORICAL DATA (COLUMBIA RIVER AT THE DALLES)

Year	STREAMFLOW (1,000 AF)			REGULATED PEAK (1,000cfs)	DATE
	APR-SEP	APR-JUN	MAY-JUN		
1961	101,940	76,860	66,185	699	JUN 8
1962	95,260	66,516	50,819	460	JUN 5
1963	87,860	58,499	47,812	437	JUN 18
1964	110,422	73,512	63,670	662	JUN 18
1965	114,222	80,098	62,467	520	JUN 9
1966	87,386	58,250	45,962	396	JUN 12
1967	109,319	74,378	66,452	622	JUN 10
1968	89,102	55,593	47,994	404	JUN 13
1969	112,377	85,742	63,899	515	MAY 15
1970	88,243	62,993	55,227	425	MAY 28
1971	126,898	91,781	76,453	557	MAY 13
1972	135,500	97,041	81,451	619	JUN 20
1973	65,549	43,765	36,565	221	DEC 5
1974	139,501	99,035	78,946	588	JUN 20
1975	108,906	73,018	62,861	422	MAY 17
1976	122,771	79,084	62,554	418	MAY 14
1977	54,108	35,505	28,394	213	JAN 25
1978	100,968	67,287	52,035	313	JUN 10
1979	76,700	54,900	44,984	311	MAY 25
1980	91,631	68,229	53,704	345	JUN 18
1961-80 AVG	100,933	70,104	57,422	457	

LOWER COLUMBIA RIVER FLOOD STAGES (WITH 9.5' TIDE AT ASTORIA)

VANCOUVER GAGE (NWS)	FLOW AT THE DALLES (1,000 cfs)	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

Forecast Date of Low Flow Values

	Forecast Point	Low Flow Value Second/Ft	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
OWYHEE AND MALHEUR BASINS	Owyhee nr Rome	2000	May 14	May 14
		1000	May 28	May 28
		500	Jun 11	Jun 11
BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS	Eagle Ck above	225	Jul 25	Jul 25
	Skull Ck	160	Aug 5	Aug 5
	Catherine Ck near	49	Aug 1	Avg Value 49
	Union	100	Jul 9	Jul 9
		50	Jul 28	Jul 28
	Powder near	100	Jun 26	Jun 25
	Sumpter	20	Jul 23	Jul 22
	Deer Ck ab Phillips	40	Jun 18	Jun 17
	Resv nr Sumpter	10	Jul 7	Jul 6
UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS	Umatilla at Pendleton	550	May 14	May 17
	SF Walla Walla nr Milton	200	Jun 6	Jun 9
		97	Aug-Sep Min Flow	Avg Value 105
UPPER JOHN DAY BASIN	John Day at Service Ck	210	Aug 1	Avg Value 212
UPPER DESCHUTES AND CROOKED BASINS	Crane Prairie	362	Peak	
	Net Inflow	223	Oct 31	
		Peak	Jun 3	
	Crooked R nr Post	100	May 30	Jun 1
	Deschutes blw Bend	1500	Jun 20	Jul 1
	Little Deschutes nr	400	Jun 5	Jun 7
	LaPine	200	Jul 6	Jul 8
	Squaw Ck nr Sisters	100	Aug 15	Aug 16
	Tumalo Ck nr Bend	235	Jun 22	Jun 23
		207	Jun 24	Jun 25
		150	Jul 3	Jul 5
		71	Aug 5	Aug 7

Forecast Date of Low Flow Values

	Forecast Point	Low Flow Value Second/Ft	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS	Clear Branch Inflow	* 37	Jul 15-31	**39
	White bl Tygh Valley	200	Jun 30	Jul 3
		140	Aug 1	Avg Value 145
ROGUE AND UMPQUA BASINS	Cow Ck nr Azalea	20	Jul 1	Jul 4
		10	Aug 15	Aug 19
	Little Butte Ck SF	100	May 11	May 15
	South Umpqua nr Brockway	90	Jul 27	Jul 30
	South Umpqua at Tiller	140	Jul 7	Jul 10
		90	Jul 27	Jul 30
		60	Aug 24	Aug 27
LAKE COUNTY AND GOOSE LAKE BASINS	Deep Ck above Adel	100	Jun 21	Jun 21
	Honey Ck near Plush	100	May 14	May 15
		50	May 28	May 30
	Twentymile near Adel	50	Jun 1	Jun 2
		10	Jul 2	Jul 3
HARNEY BASIN	Silvies near Burns	400	May 4	May 5
		200	May 20	May 21
		100	Jun 8	Jun 9
		50	Jun 21	Jun 23
	Donner und Blitzen	200	Jun 13	Jun 15
		100	Jul 3	Jul 5

* Average cfs forecast to flow for this two-week period.

** Average cfs for period of record.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State

- Oregon Department of Water Resources
- Oregon State University
- Soil and Water Conservation Districts of Oregon

Federal

- U.S. Department of Agriculture
  - Extension Service
  - Forest Service
- U.S. Department of Army
  - Corps of Engineers
- U.S. Department of Commerce
  - NOAA, National Weather Service
- U.S. Department of Energy
  - Bonneville Power Administration
- U.S. Department of the Interior
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey

Local

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- City of Baker
- City of La Grande
- City of Portland
- City of The Dalles
- City of Walla Walla
- Douglas County Water Resources Survey
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control – Owyhee Project
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control – Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale – Oregon Irrigation District
- Warmsprings Irrigation District

Private

- Pacific Power and Light Company
- Portland General Electric Company
- The Crag Rats, Hood River, Oregon

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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Oregon Water Supply Outlook

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Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Oregon Water Supply Outlook

and

Federal – State – Private Cooperative Snow Surveys

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Chief
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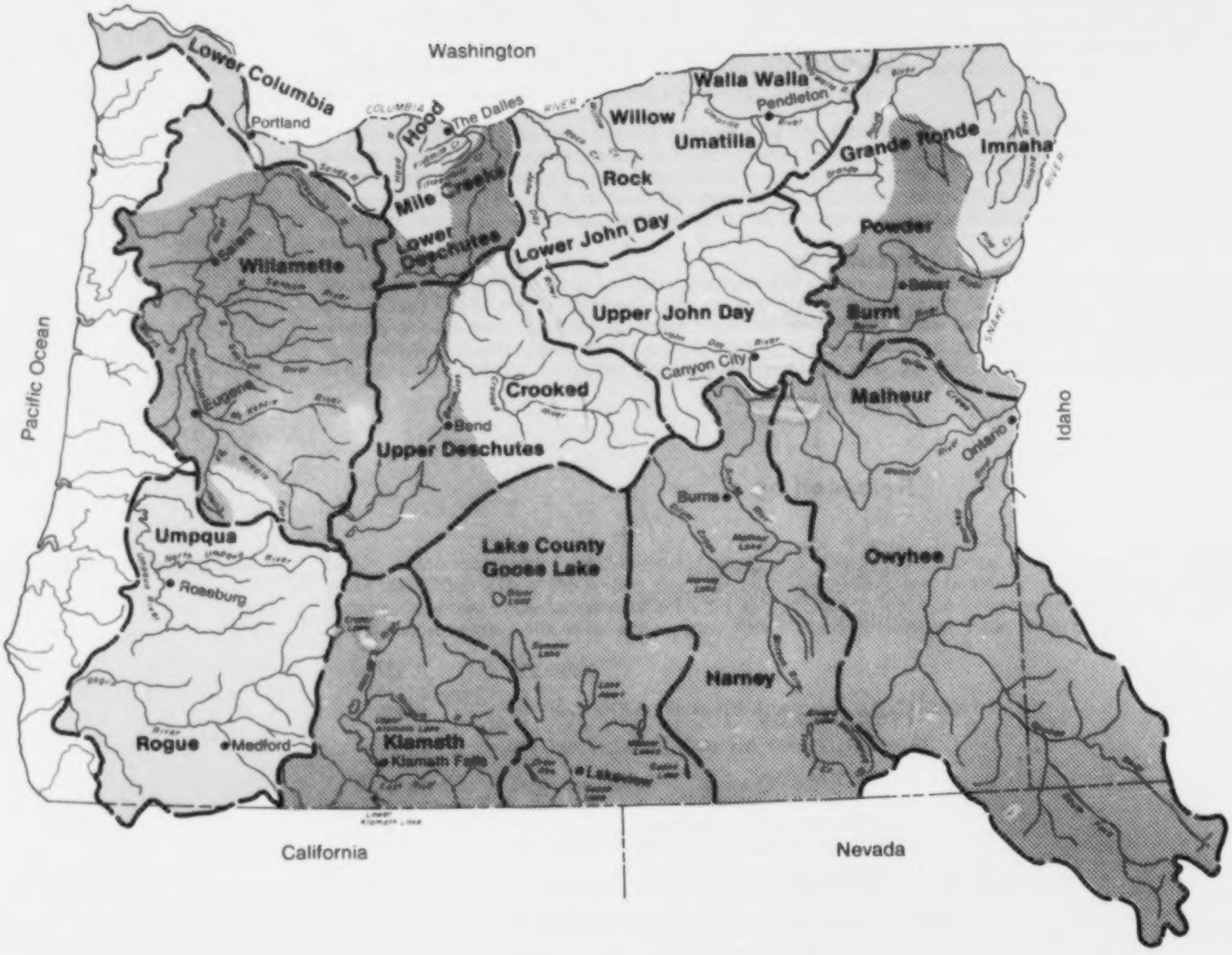
Programs and assistance of the United States Department of Agriculture are available without regard to race, *creed, color, sex, age, or national origin.*

Streamflow Prospects for Oregon

Spring and Summer Period



Streamflow Prospects

▨ Much above average: (>130%)

▨ Above average: (110-130%)

▨ Near average: (90-110%)

▨ Below average: (70-90%)

▨ Much below average: (<70%)

☐ Not forecast

GENERAL OUTLOOK

SUMMARY:

WATER SUPPLIES WILL RANGE FROM BELOW NORMAL TO NEAR NORMAL THIS SUMMER. IRRIGATORS WITH ACCESS TO STORED WATER SUPPLIES WILL HAVE AMPLE AMOUNTS AGAIN THIS YEAR. THE MOUNTAIN SNOWPACK IS MUCH BELOW AVERAGE OVER MOST OF THE STATE. PRECIPITATION DURING APRIL WAS BELOW AVERAGE. RESERVOIR STORAGE IS EXCELLENT.

SNOWPACK:

Most of the low elevation snow is gone and the high elevation snow is below average. It is about 1/2 normal in the Mt. Hood area, Willamette River drainage, John Day watershed, and in northeastern Oregon. The Deschutes drainage has a snowpack that is 73% of normal. Harney and Malheur Counties have the highest snowpack (98% and 83% respectively). The snowpack is essentially gone from the rest of the state.

PRECIPITATION:

April precipitation was below average west of the Cascades and much below average east of the mountains. The exception to this is Malheur County where it was 98% of average. Precipitation for the water year to date is near average for all of Oregon except in Lake, Harney, and Malheur Counties where it has been above average.

RESERVOIRS:

Reservoir storage is excellent again this year. Currently, 29 principal irrigation reservoirs contain 3,099,500 acre feet of stored water. This is 94% of total usable capacity and 116% of average for this time of year.

STREAMFLOW:

April streamflow was below normal on the west side of the Cascades and near normal in eastern Oregon. The Owyhee Reservoir inflow was the exception with 141% of normal flow during April.

Prospective streamflow as percent of average on representative Oregon streams is as follows:

STREAM	PERIOD	% OF AVERAGE
OWYHEE NET INFLOW	MAY-SEP	97%
GRANDE RONDE AT LAGRANDE	MAY-SEP	88%
UMATILLA AT PENDLETON	MAY-SEP	78%
DESCHUTES AT BENHAM FALLS	MAY-SEP	92%
WILLAMETTE MF NR OAKRIDGE	MAY-SEP	94%
ROGUE AT RAYGOLD	MAY-SEP	82%
UPP. KLAMATH LK NET INFLOW	MAY-SEP	95%
SILVIES NEAR BURNS	MAY-SEP	94%

Malheur Lake in Harney County has surpassed last year's record high peak. The lake remained near 4102.5 in April and peaked near the end of April at 4102.55 feet. The July 1 forecast is for an elevation of 4101.70 feet and a surface area of 118,600 acres.

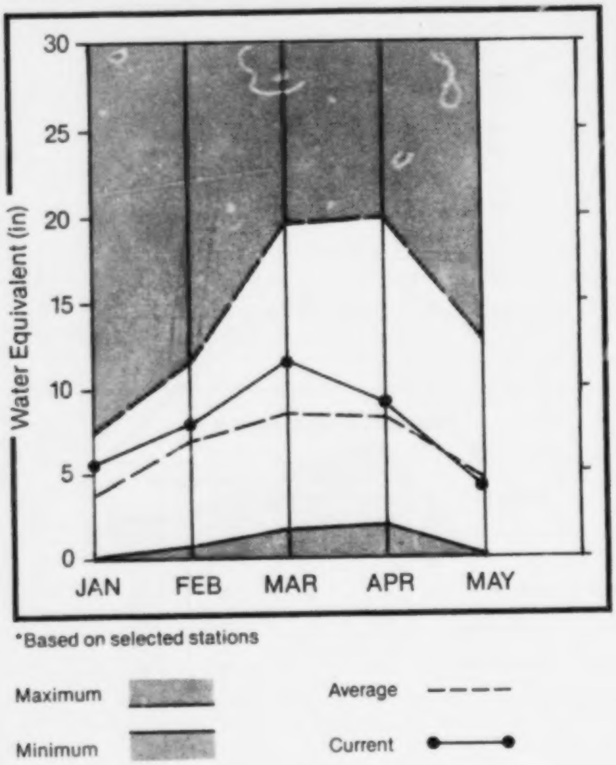
These forecasts assume normal weather conditions will occur throughout the forecast period.

The forecasts in this bulletin are a result of coordinated activity between the Soil Conservation Service and the National Weather Service in an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, U.S. Geological Survey, NOAA, National Weather Service and other cooperators.

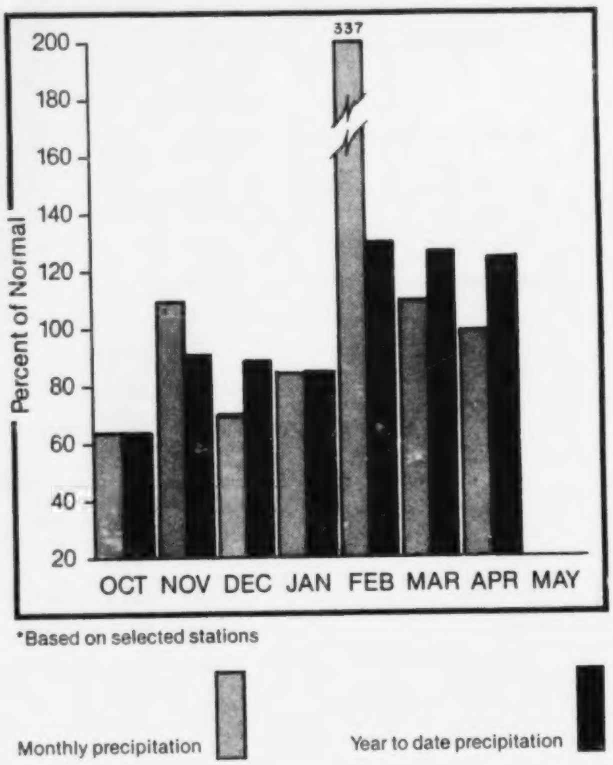
Owyhee and Malheur Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Summer streamflow should be near normal in Malheur County. The May 1 snowpack is 83% of average. Precipitation during April was 98% of normal and for the water year to date it has been 125%. Reservoir storage in the County is excellent with all major reservoirs close to being filled.

For more information contact your local Soil Conservation Service office.

OWYHEE AND MALHEUR BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BULLY CREEK at Warmsprings	MAR-MAY	14.4	13.2	91	132	56				
MALHEUR near Drewsey	MAY-JUL	32.6	31.0	95	138	52				
	MAY-SEP	34.3	32.0	93	137	50				
MALHEUR, NORTH FORK at Beulah	MAY-JUL	35.4	34.0	96	147	45				
	MAY-SEP	40.9	39.3	96	142	51				
OWYHEE RESERVOIR net Inflow	MAY-JUL	186.7	181.0	96	137	57				
	MAY-SEP	213.6	207.2	97	137	57				
OWYHEE at Rome	MAY-JUL	189.7	184.0	96	142	52				
SUCCOR CREEK nr Jordan Valley	MAY-JUL	5.1	4.8	94	137	59				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BEULAH RES	60.0	59.4	59.1	50.3
BULLY CREEK	30.0	29.2	29.9	25.8
OWYHEE	715.0	713.9	709.9	618.4
WARMSPRINGS	191.0	179.5	180.9	142.5

WATERSHED SNOWPACK ANALYSIS

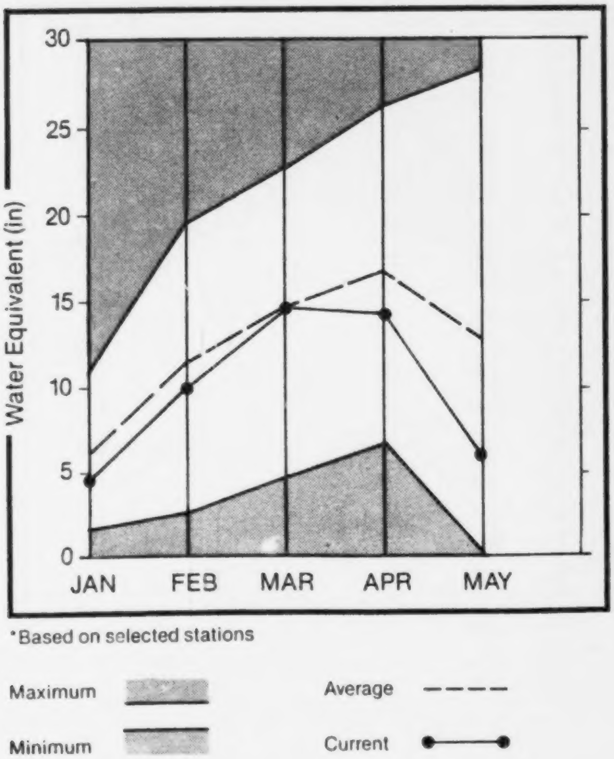
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Owyhee River	5	84	75
Malheur	2	0	0
Jordan Creek	1	0	91
Bully Creek	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

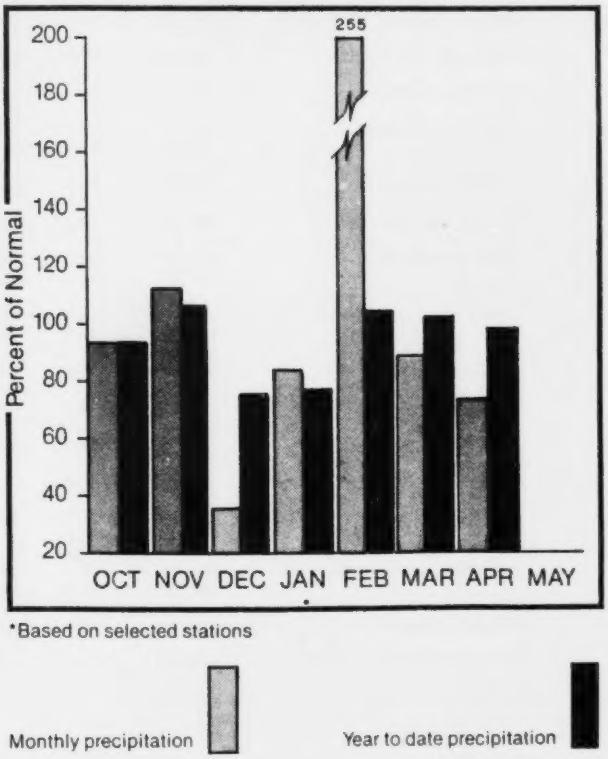
Burnt, Powder, Grande Ronde, and Imnaha Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies in northeastern Oregon are forecast to be near normal this summer. Streamflows should range from 87% to 100% of normal. The snowpack is only 1/2 of the May 1 average, with most of the low elevation snow now being gone. April precipitation was 72% of normal. For the October-April period, it has been 98% of normal. All irrigation reservoirs in the area are currently full or will be full this year.

For more information contact your local Soil Conservation Service office.

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
ANTHONY CREEK blw NF nr Powder	MAY-JUL	13.5	12.8	95	126	67				
BEAR CREEK near Wallowa	MAY-SEP	57.8	54.9	94	112	76				
BIG CREEK blw Burn Ck	MAY-JUL	6.4	5.9	92	125	63				
BURNT near Hereford	MAY-JUL	15.4	14.6	95	162	32				
	MAY-SEP	16.9	16.3	96	154	41				
CATHERINE CK near Union	MAY-SEP	52.9	49.2	93	112	76				
DEER CK near Sumpter	MAY-JUL	11.2	10.7	95	134	63				
EAGLE CK above Skull Ck	MAY-JUL	146.7	139.3	95	115	75				
	MAY-SEP	161.9	153.8	95	115	75				
GRANDE RONDE at La Grande	MAY-JUL	94.7	83.3	87	122	53				
	MAY-SEP	98.9	87.1	88	123	53				
HURRICANE CK near Joseph	MAY-SEP	43.6	39.2	90	110	71				
IMNAHA at Imnaha	MAY-SEP	248.6	219.0	88	117	59				
LOSTINE near Lostine	MAY-SEP	115.6	100.5	86	104	70				
PINE CREEK near Oxbow	MAY-JUL	143.5	127.2	88	118	59				
POWDER near Sumpter	MAY-JUL	41.0	38.9	95	124	66				
	MAY-SEP	42.2	40.1	95	126	64				
EAST FORK WALLOWA near Joseph	MAY-JUL	8.1	7.9	98	111	86				
	MAY-SEP	10.4	10.4	100	115	87				
WALLOWA at Joseph	MAY-JUL	66.9	65.5	97	143	52				
WOLF CK RESERVOIR net Inflow	MAY-JUN	8.5	8.3	98	153	47				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
PHILLIPS LAKE	73.5	73.7	74.7	59.7
THIEF VALLEY	17.4	17.9	---	16.5
UNITY	25.2	25.3	24.5	24.1
WALLOWA LAKE	37.5	28.3	19.8	25.4
WOLF CREEK	10.4	11.1	9.8	---

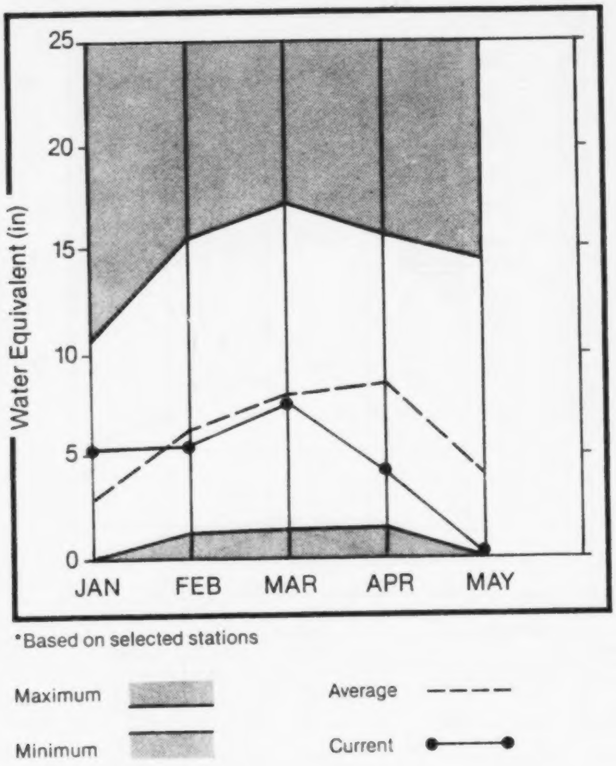
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Grande Ronde ab LaGrande	1	0	0
Powder River	1	107	126
Wallowa,Imnaha,Catherine	5	95	86
Burnt River	1	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

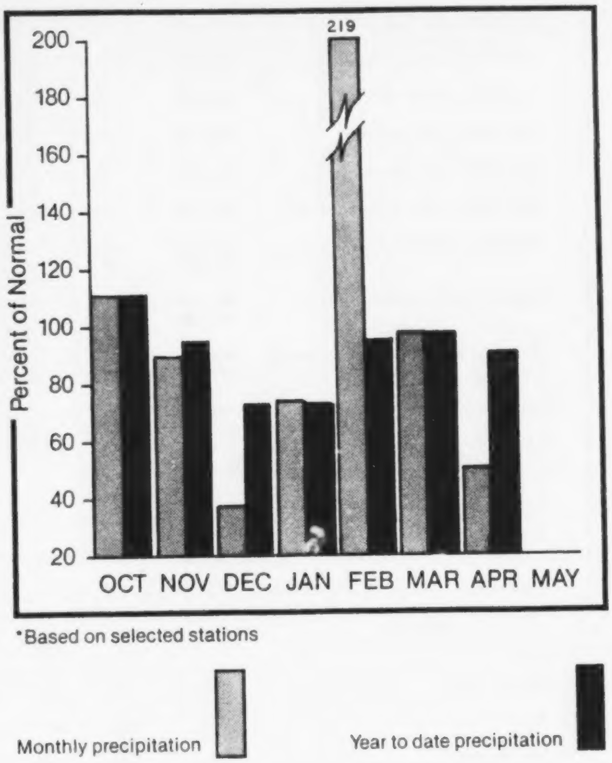
Umatilla, Walla Walla, Willow, Rock, and Lower John Day Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflow is forecast to be below normal this summer. The forecast ranges from 75% to 88% of normal. Most of the snow is gone. April precipitation was only 1/2 of average. For the water year to date, the precipitation has been one of the lowest in Oregon at 91% of average. McKay Reservoir is storing an adequate amount of water while Cold Springs is only storing 82% of normal amounts of water for this time of year.

For more information contact your local Soil Conservation Service office.

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BUTTER CK NEAR PINE CITY	MAY-JUL	3.7	2.7	74	135	27				
COUSE CK nr Milton Freewater	MAY-JUL	1.6	1.3	86	125	62				
MCKAY near Pilot Rock	MAY-SEP	8.3	6.6	79	157	24				
PINE CREEK near Weston	MAY-JUL	0.8	0.6	75	125	125				
RHEA CREEK near Heppner	MAY-JUL	2.2	1.7	80	91	45				
ROCK CREEK above Cayuse Canyon	MAY-JUL	2.4	2.1	87	125	42				
UMATILLA near Gibbon	MAY-JUL	41.3	31.0	75	109	41				
	MAY-SEP	47.6	36.0	75	103	48				
UMATILLA near Pendleton	MAY-JUL	71.5	55.0	76	117	36				
	MAY-SEP	76.9	60.0	78	120	36				
SF WALLA WALLA nr MiltonFreewater	MAY-JUL	38.6	28.9	74	96	54				
	MAY-SEP	52.6	40.5	76	97	57				
WILLOW CREEK near Heppner	MAY-JUL	3.2	2.6	81	125	63				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COLD SPRINGS	50.0	39.3	40.5	48.2
MCKAY	73.8	68.1	68.9	57.0
WILLOW CREEK	1.8	1.9	---	---

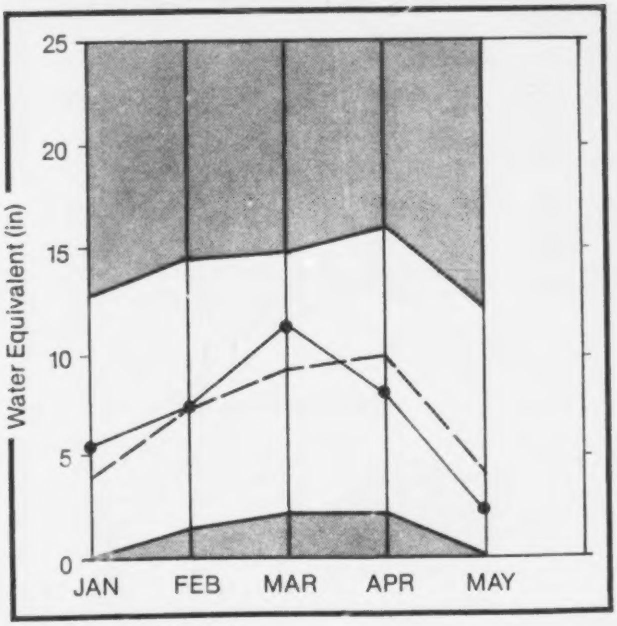
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Walla Walla River	0	0	0
Umatilla River	0	0	0
McKay Creek	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

Upper John Day Basin

Mountain snowpack* (inches)



*Based on selected stations

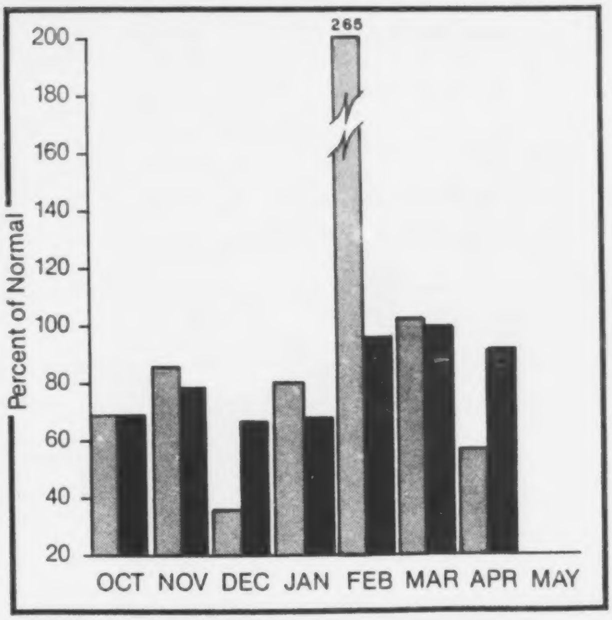
Maximum ▨

Minimum ▨

Average ----

Current ●—●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▨

Year to date precipitation ■

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be near 85% of normal this summer. The May 1 snowpack is only 1/2 of normal with most of the low elevation snow gone. April precipitation was 57% of normal while for the water year it has been 92%.

For more information contact your local Soil Conservation Service office.

UPPER JOHN DAY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CAMAS CREEK nr Ukiah	MAY-JUL	16.7	14.3	85	138	36				
	MAY-SEP	17.3	14.8	86	139	35				
MF JOHN DAY at Ritter	MAY-JUL	70.1	60.2	86	124	49				
	MAY-SEP	73.9	64.0	86	123	50				
MF JOHN DAY at Monument	MAY-JUL	349.6	297.0	84	108	62				
	MAY-SEP	365.2	305.0	83	107	61				
MOUNTAIN CREEK near Mitchell	MAY-JUL	2.1	1.7	85	143	48				
STRAWBERRY CREEK nr Prairie City	MAY-JUL	6.7	5.9	88	119	60				
	MAY-SEP	7.4	6.5	87	108	68				

RESERVOIR STORAGE (1000AF)

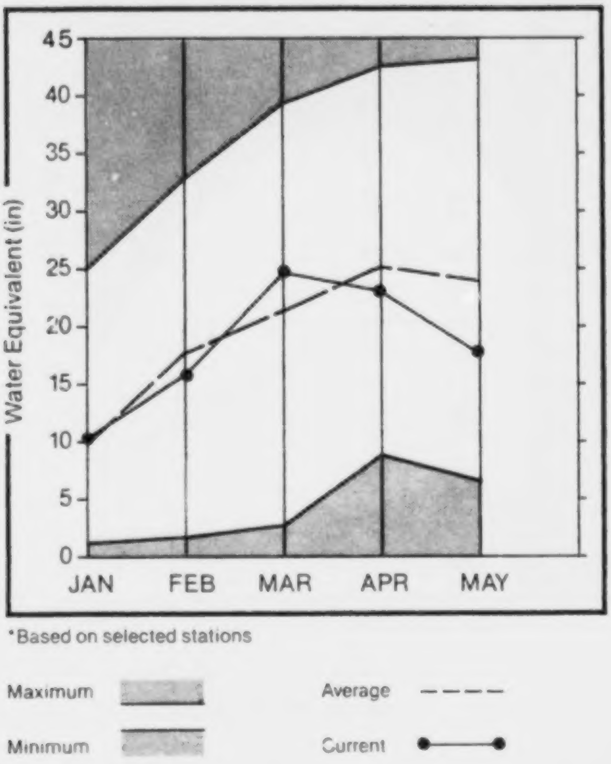
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

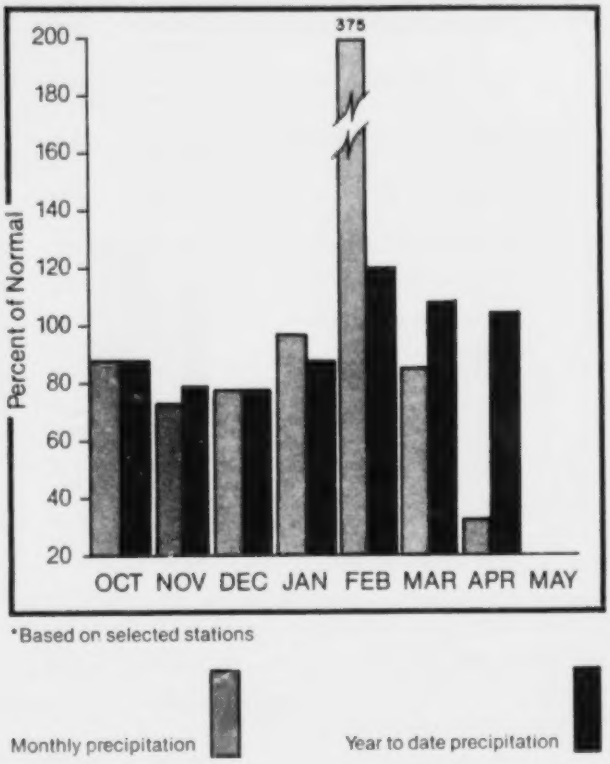
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
John Day, North Fork	0	0	0
John Day above Dayville	1	238	67

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

Upper Deschutes and Crooked Basins


Mountain snowpack* (inches)

*Based on selected stations


Precipitation* (percent of normal)

*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflow in the Crooked River is forecast to be 85% of normal. In the Deschutes River system the forecast ranges from 90% to 95% of normal. The May 1 snowpack is 73% of normal. Precipitation during April was the lowest in Oregon with only 31% of normal amounts being received. For the water year, however, it has been 104%. Reservoir storage is excellent with most reservoirs being nearly full.

For more information contact your local Soil Conservation Service office.

UPPER DESCHUTES AND CROOKED BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BEAVER CREEK nr Paulina	MAY-JUL	4.8	4.4	92	125	63				
	MAY-SEP	4.9	4.5	92	122	61				
CRANE PRAIRIE RES net Inflow	MAY-JUL	60.3	57.2	95	119	71				
	MAY-SEP	100.1	95.1	95	119	71				
CRESCENT CK nr Crescent Lake	MAY-JUL	13.8	12.7	92	167	58				
	MAY-SEP	17.5	16.1	92	131	51				
CROOKED nr Prineville	MAY-JUL	35.1	29.8	84	154	37				
	MAY-SEP	35.5	31.2	87	155	37				
NF CROOKED blw Lookout Ck	MAY-JUL	4.2	3.5	85	119	48				
DESCHUTES below Bend	AUG-SEP	174.0	157.9	90	116	66				
DESCHUTES at Benham Falls	MAY-JUL	277.3	255.1	92	109	75				
	MAY-SEP	464.2	427.0	91	108	76				
DESCHUTES below Snow Creek	MAY-SEP	53.3	46.9	88	113	64				
LITTLE DESCHUTES nr Lapine	MAY-JUL	50.7	45.6	90	108	71				
	MAY-SEP	60.1	55.2	91	115	68				
OCHOCO RESERVOIR net Inflow	MAY-JUL	8.8	7.7	87	182	45				
	MAY-SEP	8.9	7.8	87	180	45				
SQUAW CREEK nr Sisters	MAY-SEP	43.7	41.5	95	112	78				
TUMALO CREEK near Bend	MAY-SEP	39.6	36.4	91	106	78				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CRANE PRAIRIE	55.3	52.6	54.4	44.0
CRESCENT LAKE	86.9	80.6	85.8	55.9
OCHOCO	47.5	45.8	44.1	32.3
PRINEVILLE	153.0	153.3	156.4	145.8
WICKIUP	200.0	192.2	196.3	190.4

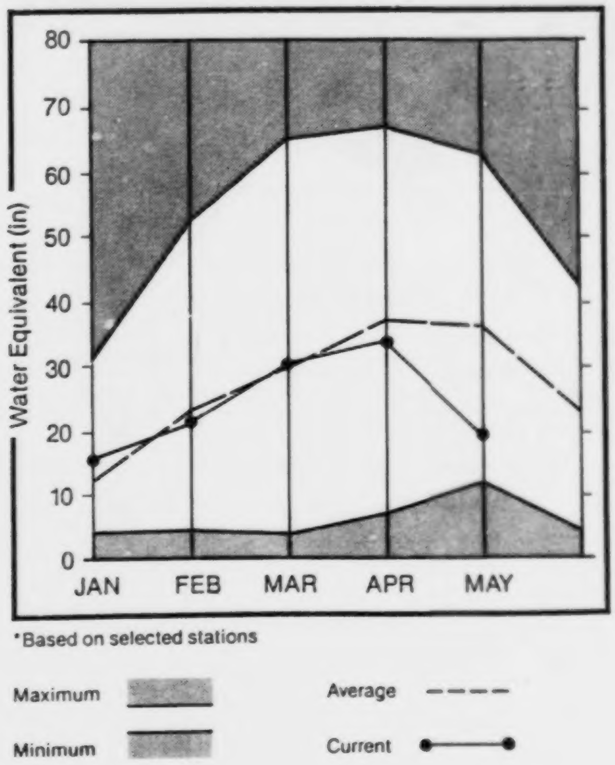
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Crooked, Ochoco	0	0	0
Deschutes above Wickiup	1	71	72
Little Deschutes	1	0	0
Tumalo and Squaw Creeks	3	72	64

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

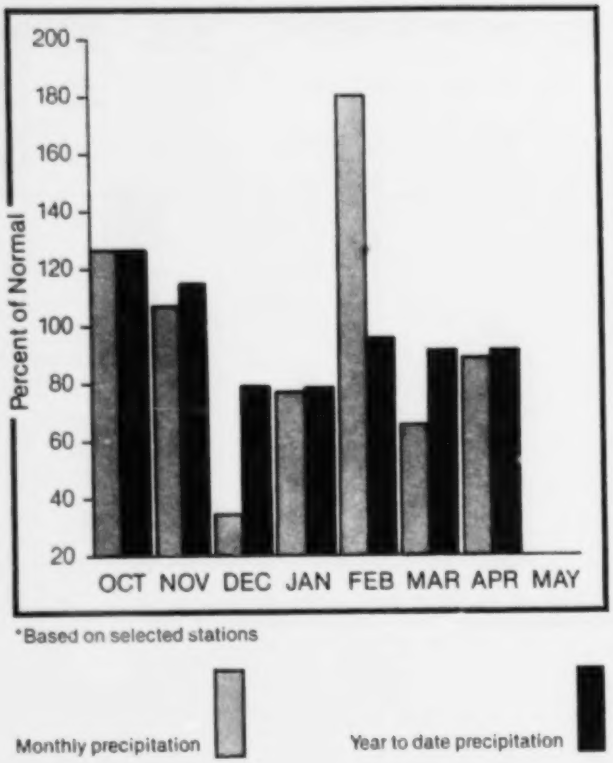
Hood, Mile Creeks, and Lower Deschutes Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Adequate water supplies will be available this summer in the Mt. Hood area. Streamflows are forecast to be 88% of normal. Reservoir storage is very good with Clear Lake currently containing 175% of average water supplies. The snowpack is 56% of normal. Precipitation for the water year has been 91% of average. During April, the area received 88% of normal amounts of rainfall.

For more information contact your local Soil Conservation Service office.

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
HOOD RIVER near Tucker Bridge	MAY-JUL	162.7	143.1	88	104	72				
	MAY-SEP	209.8	182.5	87	101	73				
WEST FORK HOOD RIVER nr Dee	MAY-JUL	83.1	73.1	88	103	72				
	MAY-SEP	104.5	91.9	88	103	73				
WHITE RIVER below Tygh Valley	MAY-JUL	77.1	67.0	87	105	69				
	MAY-SEP	92.2	80.2	87	107	67				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (WASCO)	11.9	9.6	8.5	5.5

WATERSHED SNOWPACK ANALYSIS

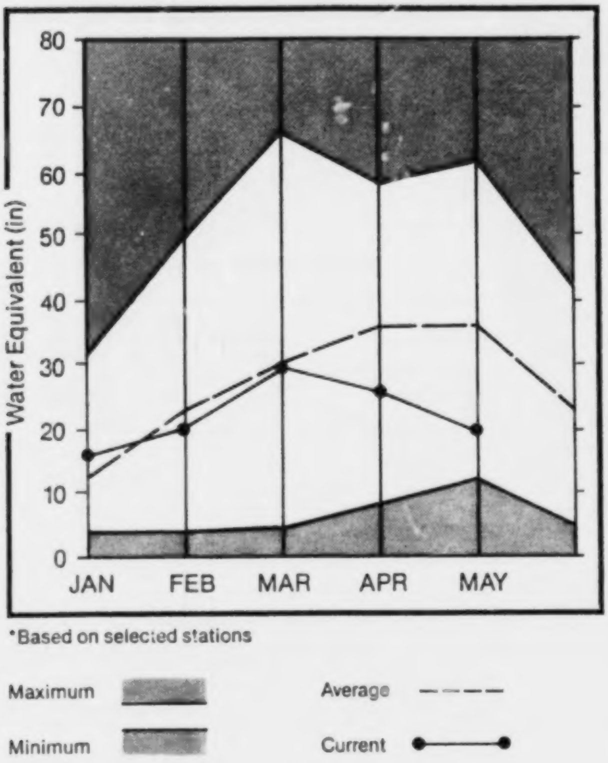
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Hood River	2	62	84
Mile Creeks	0	0	0
White River	2	62	84

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

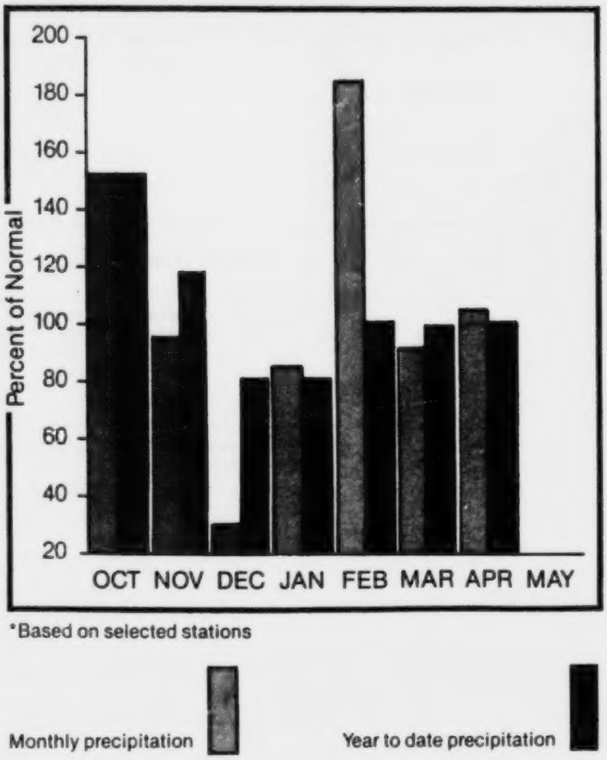
Lower Columbia Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be below normal this summer. The Columbia River at The Dalles flow for May-September will be 88% of average. Mountain snow pack in the Columbia basin above The Dalles is 80% of normal. April precipitation was 105% of normal. For the water year to date, it has been normal.

For more information contact your local Soil Conservation Service office.

LOWER COLUMBIA BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COLUMBIA at The Dalles	MAY-JUL	73760.0	62800.0	85	98	72				
	MAY-SEP	88292.0	77800.0	88	101	75				
SANDY RIVER near Marmot	MAY-JUL	221.9	179.7	81	100	62				
	MAY-SEP	275.7	229.6	83	101	65				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE **		
		THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

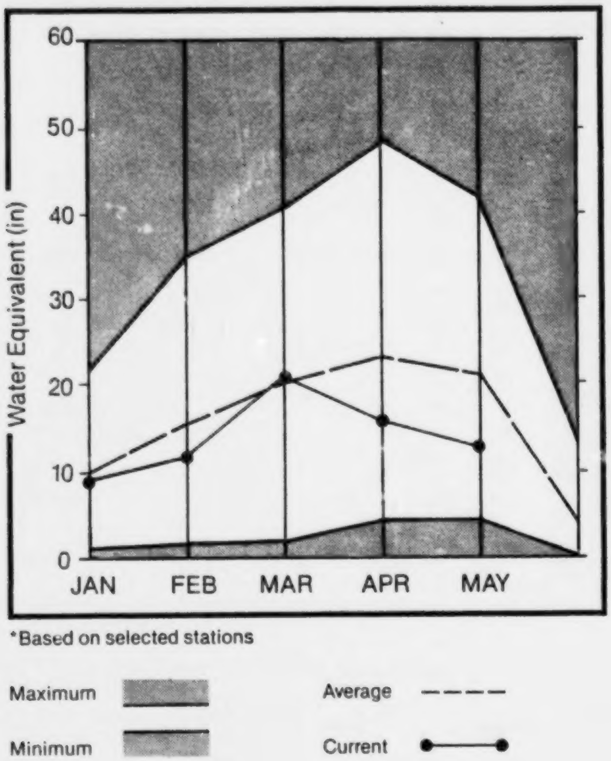
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF	
		LAST YR.	AVERAGE
Sandy River	2	62	84

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Page 29 for Historical Data and Flood Stages.

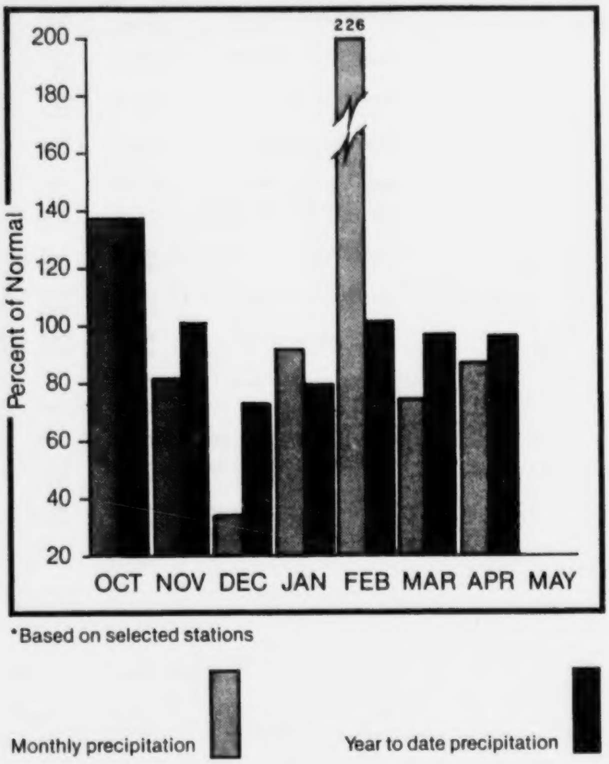
Willamette Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

The Willamette Valley should have near normal water supplies this summer. Streamflows are forecast to range from 88% to 98% of normal. The Cascade snowpack is 59% of average. Precipitation during April was 87% of average while for the October-April period it has been 97% of average.

For more information contact your local Soil Conservation Service office.

WILLAMETTE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLACKAMAS at Estacada	MAY-JUL	443.2	394.0	89	105	75				
	MAY-SEP	554.8	510.4	92	107	77				
CLACKAMAS above Three Lynx	MAY-JUL	341.0	304.9	89	102	78				
	MAY-SEP	433.4	398.7	92	103	81				
MCKENZIE at McKenzie Bridge	MAY-JUL	323.3	294.2	91	102	80				
	MAY-SEP	466.7	424.7	91	102	80				
MCKENZIE near Vida	MAY-JUL	696.9	627.2	90	103	77				
	MAY-SEP	925.5	832.9	90	103	77				
SF MCKENZIE at Rainbow	MAY-JUL	136.8	123.1	90	105	75				
	MAY-SEP	163.7	147.3	90	107	73				
MOHAWK near Springfield	MAY-JUL	32.6	30.0	92	123	61				
OAK GROVE FORK ab Power Intake	MAY-JUL	94.4	82.0	87	114	61				
	MAY-SEP	131.0	115.3	88	108	68				
ROW near Dorena	MAY-JUL	51.5	45.3	88	134	43				
	MAY-SEP	57.3	50.4	87	134	42				
NORTH SANTIAM at Mehama	MAY-JUL	478.5	430.6	90	120	60				
	MAY-SEP	585.6	521.0	89	105	75				
SOUTH SANTIAM at Waterloo	MAY-JUL	306.7	273.6	89	121	57				
	MAY-SEP	349.9	311.4	89	120	58				
SCOGGINS CREEK near Gaston	MAY-JUL	5.7	5.0	87	123	53				
THOMAS CREEK nr Scio	MAY-JUL	38.2	35.1	91	123	63				
COAST FORK WILLAMETTE nr London	MAY-JUL	14.0	12.8	92	129	57				
MF OF WILLAMETTE bl NF nr Oakridge	MAY-JUL	451.0	419.0	92	108	78				
	MAY-SEP	546.9	514.0	93	109	79				
NF OF MF OF WILLAMETTE nr Oakridge	MAY-JUL	118.1	107.5	91	109	73				
	MAY-SEP	139.7	128.5	91	110	74				
WILLAMETTE at Salem	MAY-JUL	2490.4	2390.0	96	112	80				
	MAY-SEP	2973.8	2814.9	95	116	80				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BLUE RIVER **	85.5	71.4	71.3	73.1
COTTAGE GROVE **	29.8	21.4	22.9	23.5
COUGAR **	155.2	129.0	124.0	103.1
DETROIT **	300.7	254.5	263.3	236.2
DORENA **	70.5	56.2	51.5	55.7
FALL CREEK **	115.5	100.0	97.2	94.3
FERN RIDGE **	109.6	76.5	89.0	85.4
FOSTER **	29.7	23.9	1.2	14.9
GREEN PETER **	268.2	218.2	228.6	208.8
HILLS CREEK **	200.2	179.6	172.9	149.8
LOOKOUT POINT **	337.0	268.3	267.7	233.3
TIMOTHY LAKE	61.7	55.8	59.6	55.2
HENRY HAGG LAKE	53.0	53.3	53.6	50.1

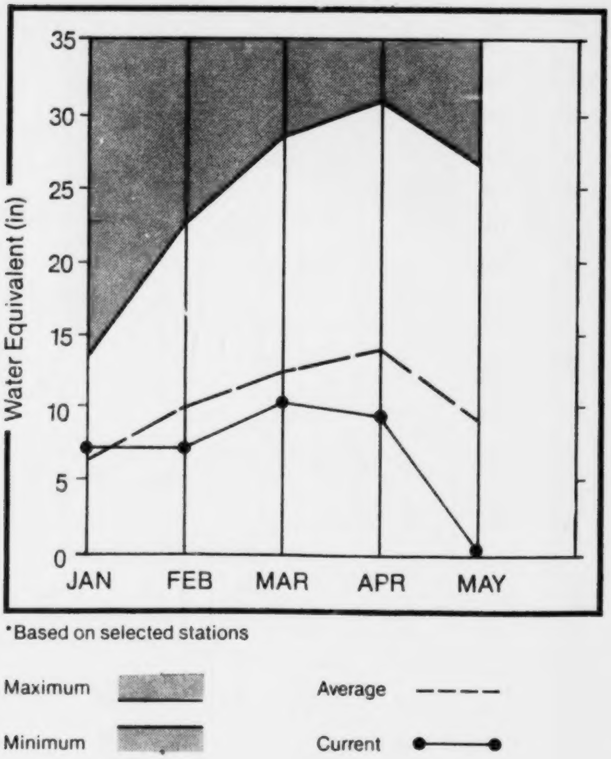
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Clackamas River	1	50	77
McKenzie River	0	0	0
Row River	0	0	0
Santiam River	2	77	87
Willamette: Middle Fork	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

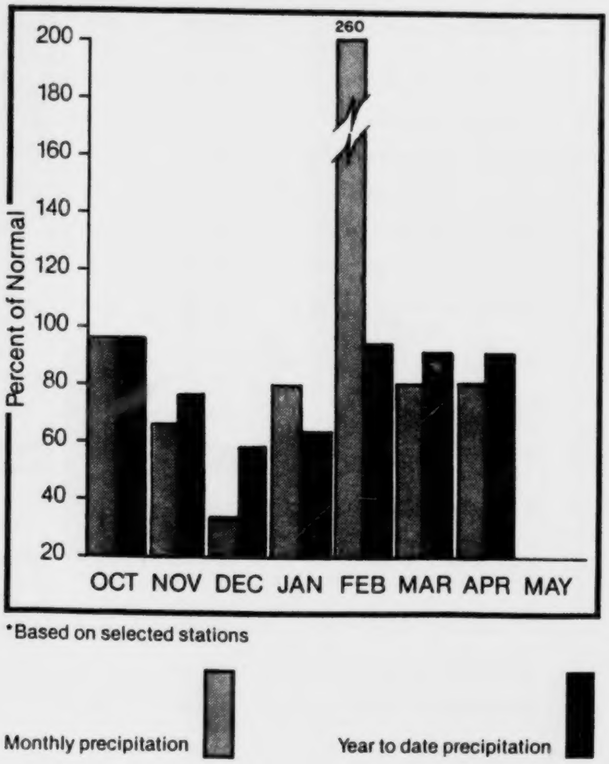
**Multiple Purpose Reservoir...Space Reserved Primarily For Flood Control.

Rogue and Umpqua Basins



Mountain snowpack* (inches)

*Based on selected stations



Precipitation* (percent of normal)

*Based on selected stations

WATER SUPPLY OUTLOOK:

Water supplies were forecast to be below normal this summer. Irrigators with stored water supplies will have an adequate amount available. Most reservoirs are currently storing above average amounts of water for this time of year. The only snow remaining is above 6000' elevation. April precipitation was 81% of average. For the water year to date, the precipitation amounts have been one of the lowest in Oregon with 91% of average being received.

For more information contact your local Soil Conservation Service office.

ROGUE AND UMPQUA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
APPLEGATE nr Copper	MAY-JUL	75.6	57.8	76	106	46				
	MAY-SEP	82.4	64.2	77	108	49				
SF BIG BUTTE CK near Butte Falls	MAY-JUL	22.1	19.4	88	118	59				
CLEARWATER above Trap Creek	MAY-SEP	56.8	51.5	90	99	83				
COW CREEK near Azalea	MAY-JUL	8.2	7.2	87	110	61				
FOURMILE LAKE net Inflow	MAY-SEP	3.3	2.9	88	148	59				
GRAVE CREEK at Pease Bridge	MAY-JUL	3.2	2.7	85	125	63				
HYATT PRAIRIE RES net Inflow	MAY-JUL	2.5	2.1	85	120	40				
ILLINOIS near Kerby	MAY-JUL	85.2	69.0	81	122	42				
	MAY-SEP	92.3	76.6	82	121	46				
MF LITTLE BUTTE CK nr Lakecreek	MAY-JUL	7.1	6.0	84	141	42				
	MAY-SEP	11.3	9.6	84	142	44				
RED BLANKET CK nr Prospect	MAY-JUL	25.9	21.7	84	116	54				
ROGUE RIVER ab Prospect	MAY-JUL	178.1	142.5	80	96	64				
	MAY-SEP	232.6	186.0	79	95	65				
SF ROGUE near Prospect	MAY-JUL	45.5	35.5	78	101	55				
	MAY-SEP	55.6	43.3	78	101	56				
ROGUE RIVER at Raygold	MAY-JUL	483.9	387.0	79	101	59				
	MAY-SEP	642.1	526.5	81	101	63				
ROGUE RIVER at Grants Pass	MAY-JUL	498.9	399.0	79	103	57				
	MAY-SEP	616.7	493.0	79	103	57				
SUCKER CREEK bl Little Grayback	MAY-JUL	34.7	27.7	80	110	49				
NORTH UMPQUA nr Tokatee Falls	MAY-SEP	137.7	112.9	81	95	69				
NORTH UMPQUA at Winchester	MAY-JUL	469.5	380.3	81	106	56				
SOUTH UMPQUA at Brockway	MAY-JUL	180.5	146.2	80	106	56				
SOUTH UMPQUA near Tiller	MAY-JUL	100.0	81.0	81	101	61				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
APPLEGATE	75.2	67.5	60.3	---
EMIGRANT LAKE	39.0	38.6	38.8	37.1
FISH LAKE	8.0	7.4	6.0	6.1
FOURMILE LAKE	16.1	13.5	14.6	10.5
HOWARD PRAIRIE	60.0	60.6	60.6	50.5
HYATT PRAIRIE	16.1	16.2	15.8	14.1
LOST CREEK **	315.0	311.3	153.8	---

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Applegate River	3	75	67
Bear Creek	4	68	58
Butte Creek	3	22	20
Illinois River	0	0	0
North Umpqua River	8	1	1
Rogue River	16	85	77
Mt. Ashland	3	75	67

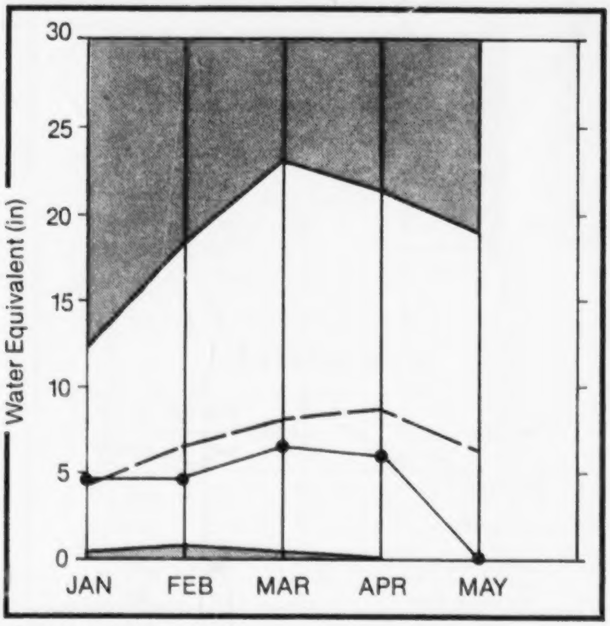
*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Pages 30-31 for Forecast Date of Low Flow Values.

**Multiple Purpose Reservoir...Space Reserved Primarily For Flood Control.

Klamath Basin

Mountain snowpack* (inches)



*Based on selected stations

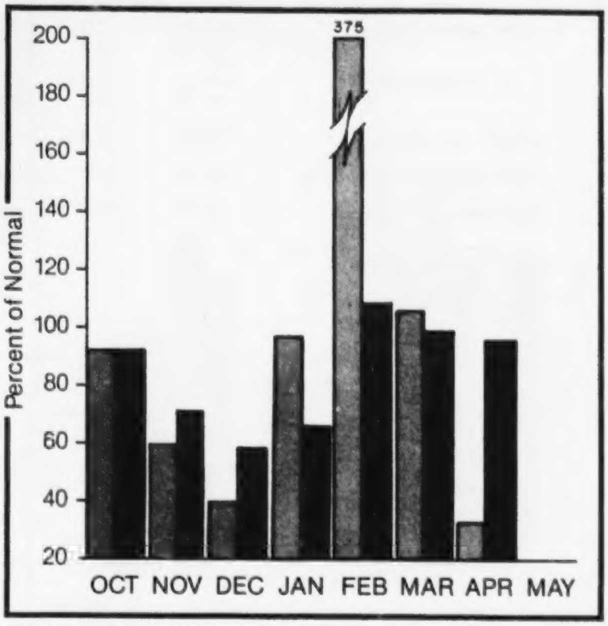
Maximum ▨

Minimum ▨

Average ----

Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▨

Year to date precipitation ■

WATER SUPPLY OUTLOOK:

Klamath County should have near normal water supplies this summer. Streamflows are forecast to range from 89% to 95% of normal. The only snow remaining is at the higher elevations. April precipitation was one of the lowest in the state with 32% of normal amounts being received. For the October-April period, the county has received 96% of normal precipitation. Reservoir storage in the county is near to above average for May 1.

For more information contact your local Soil Conservation Service office.

KLAMATH BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLEAR LAKE net Inflow	MAY-JUL	15.5	13.9	89	161	39				
	MAY-SEP	18.0	16.5	91	161	39				
GERBER RESERVOIR net Inflow	MAY-JUL	4.3	3.9	90	163	47				
	MAY-SEP	4.7	4.3	91	149	43				
SPRAGUE near Chiloquin	MAY-SEP	155.9	141.6	90	113	69				
UPPER KLAMATH LAKE net Inflow	MAY-SEP	331.0	314.4	94	115	75				
WILLIAMSON near Chiloquin	MAY-SEP	269.4	247.8	92	113	71				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (CALIF)	513.3	419.5	401.1	264.3
GERBER	94.3	92.5	94.6	69.7
UPPER KLAMATH LAKE	523.7	483.8	496.6	505.4

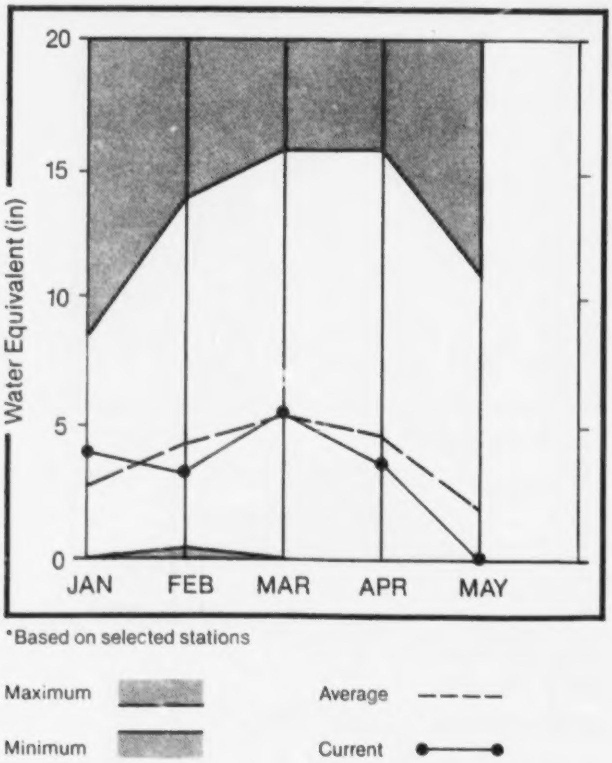
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Lost River	0	0	0
Sprague River	2	0	0
Upper Klamath Lake	6	91	88
Williamson River	3	100	103

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

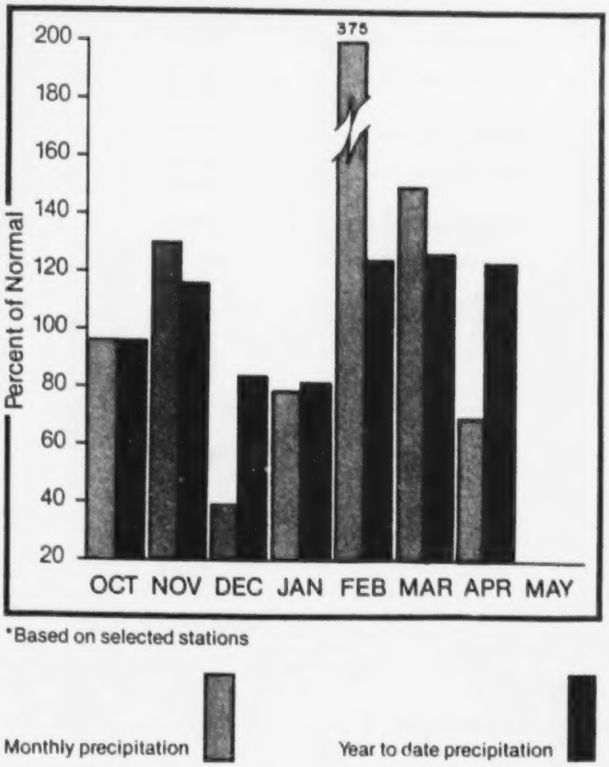
Lake County and Goose Lake Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Lake County should have near normal water supplies this summer. Streamflows should range from 88% to 98% of average. Most of the Oregon snow is gone, while California still has some remaining in the mountains. April precipitation was only 69% of average but for the water year to date the county has received 125% of normal amounts. This is one of the highest in the state. Reservoir storage is excellent.

For more information contact your local Soil Conservation Service office.

LAKE COUNTY AND GOOSE LAKE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BRIDGE CREEK at Spahr Ranch	MAY-JUL	3.0	2.9	98	133	33				
CHEWAUCAN near Paisley	MAY-JUL	53.2	50.5	95	137	53				
	MAY-SEP	57.1	54.2	95	133	58				
COTTONWOOD CK near Lakeview	MAY-JUL	6.0	5.7	95	150	50				
DEEP CREEK near Adel	MAY-JUL	42.8	40.2	93	143	47				
	MAY-SEP	44.7	42.0	93	141	47				
DREWS RESERVOIR net Inflow	MAY-JUL	9.4	8.2	87	138	43				
HONEY CREEK near Plush	MAY-JUL	11.1	10.4	93	171	36				
	MAY-SEP	11.3	10.6	93	168	44				
SILVER CREEK near Silver Lake	MAY-JUL	8.1	7.1	88	148	25				
TWENTYMILE near Adel	MAY-JUL	10.3	9.6	93	184	29				
	MAY-SEP	10.8	10.1	93	185	37				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COTTONWOOD	8.7	8.7	7.0	6.2
DREWS	63.0	62.5	62.5	55.5
THOMPSON VALLEY	18.4	18.4	18.8	15.9

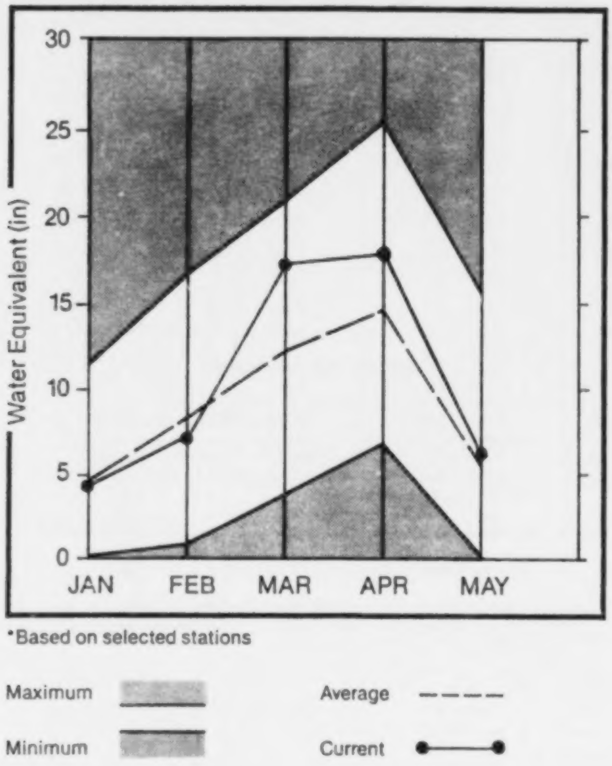
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Chewaucan River	1	0	0
Deep Creek	2	0	0
Drew Creek	1	117	45
Honey Creek	2	0	0
Silver Creek (Lake Co.)	0	0	0
Twentymile Creek	2	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

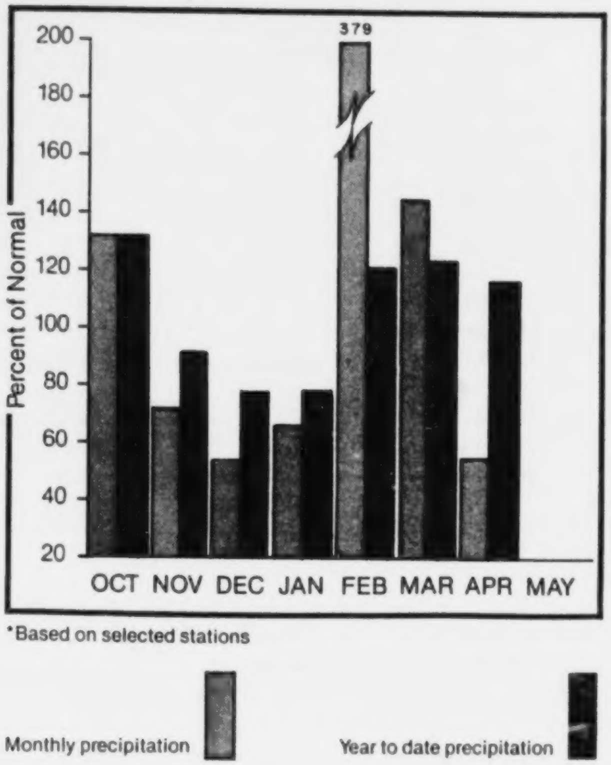
Harney Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Harney County will have near normal amounts of water this summer. Streamflows are forecast to range from 90% to 94% of normal. The snowpack, at 98% of average, is the highest in the state. April precipitation was 55% of normal. For the October thru April period, it has been 116% of normal. Malheur Lake peaked during the end of April at an elevation of 4102.55 feet. It is forecast to be at 4101.70 feet on July 1.

For more information contact your local Soil Conservation Service office.

HARNEY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
DONNER UND BLITZEN nr Frenchglen	MAY-JUL	42.0	37.8	90	119	60				
	MAY-SEP	47.1	42.3	89	121	59				
SILVER CREEK near Riley	MAY-JUL	5.6	5.2	92	179	54				
SILVIES near Burns	MAY-JUL	36.9	34.6	93	157	30				
	MAY-SEP	38.8	36.4	93	160	26				
TROUT CREEK nr Denio	MAY-JUL	5.9	5.4	91	169	51				
	MAY-SEP	6.9	6.3	91	159	43				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Donner und Blitzen River	1	0	4
Silver Creek (Harney Co)	0	0	0
Silvies River	1	0	0
Trout Creek	1	0	4

MALHEUR LAKE ELEVATION FORECAST:

		Gage Height	Surface Acres	Avg. Surface Acres
Malheur Lake at Break in Cole	Jul 1	4101.70	118,600	40,000
Island Dike nr Voltage	Aug 1	4101.20	114,600	33,000

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.
See Pages 30-31 for Forecast Date of Low Flow Values.

HISTORICAL DATA (COLUMBIA RIVER AT THE DALLES)

Year	STREAMFLOW (1,000 AF)			REGULATED PEAK (1,000cfs)	DATE
	APR-SEP	APR-JUN	MAY-JUN		
1961	101,940	76,860	66,185	699	JUN 8
1962	95,260	66,516	50,819	460	JUN 5
1963	87,860	58,499	47,812	437	JUN 18
1964	110,422	73,512	63,670	662	JUN 18
1965	114,222	80,098	62,467	520	JUN 9
1966	87,386	58,250	45,962	396	JUN 12
1967	109,319	74,378	66,452	622	JUN 10
1968	89,102	55,593	47,994	404	JUN 13
1969	112,377	85,742	63,899	515	MAY 15
1970	88,243	62,993	55,227	425	MAY 28
1971	126,898	91,781	76,453	557	MAY 13
1972	135,500	97,041	81,451	619	JUN 20
1973	65,549	43,765	36,565	221	DEC 5
1974	139,501	99,035	78,946	588	JUN 20
1975	108,906	73,018	62,861	422	MAY 17
1976	122,771	79,084	62,554	418	MAY 14
1977	54,108	35,505	28,394	213	JAN 25
1978	100,968	67,287	52,035	313	JUN 10
1979	76,700	54,900	44,984	311	MAY 25
1980	91,631	68,229	53,704	345	JUN 18
1961-80 AVG	100,933	70,104	57,422	457	

LOWER COLUMBIA RIVER FLOOD STAGES (WITH 9.5' TIDE AT ASTORIA)

VANCOUVER GAGE (NWS)	FLOW AT THE DALLES (1,000 cfs)	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

Forecast Date of Low Flow Values

	Forecast Point	Low Flow Value Second/Ft	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
OWYHEE AND MALHEUR BASINS	Owyhee nr Rome	2000	May 12	May 14
		1000	May 26	May 28
		500	Jun 9	Jun 11
BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS	Eagle Ck above Skull Ck	225	Jul 21	Jul 25
		160	Aug 1	Aug 5
	Catherine Ck near Union	47	Aug 1	Avg Value 49
		100	Jul 5	Jul 9
		50	Jul 24	Jul 28
	Powder near Sumpter	100	Jun 23	Jun 25
		20	Jul 20	Jul 22
	Deer Ck ab Phillips Resv nr Sumpter	40	Jun 15	Jun 17
		10	Jul 4	Jul 6
UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS	Umatilla at Pendleton	550	May 10	May 17
			Jun 1	
	SF Walla Walla nr Milton	200		Jun 9
		85	Aug-Sep Min Flow	Avg Value 105
UPPER JOHN DAY BASIN	John Day at Service Ck	190	Aug 1	Avg Value 212
UPPER DESCHUTES AND CROOKED BASINS	Crane Prairie Net Inflow	470	Peak	
		278	Oct 31	
		Peak	Jun 3	
	Crooked R nr Post	100	May 26	Jun 1
	Deschutes blw Bend	1500	Jun 10	Jul 1
	Little Deschutes nr LaPine	400	Jun 4	Jun 7
		200	Jul 5	Jul 8
	Squaw Ck nr Sisters	100	Aug 12	Aug 16
	Tumalo Ck nr Bend	235	Jun 19	Jun 23
		207	Jun 21	Jun 25
		150	Jul 1	Jul 5
		71	Aug 3	Aug 7

Forecast Date of Low Flow Values

	Forecast Point	Low Flow Value Second/Ft	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS	Clear Branch Inflow	* 35	Jul 15-31	**39
	White bl Tygh Valley	200	Jun 30	Jul 3
				Avg Value
		140	Aug 1	145
ROGUE AND UMPQUA BASINS	Cow Ck nr Azalea	20	Jul 1	Jul 4
		10	Aug 15	Aug 19
	Little Butte Ck SF	100	May 9	May 15
	South Umpqua nr Brockway	90	Jul 23	Jul 30
	South Umpqua at Tiller	140	Jul 4	Jul 10
		90	Jul 24	Jul 30
		60	Aug 21	Aug 27
LAKE COUNTY AND GOOSE LAKE BASINS	Deep Ck above Adel	100	Jun 17	Jun 21
	Honey Ck near Plush	100	May 11	May 15
		50	May 26	May 30
	Twentymile near Adel	50	May 30	Jun 2
		10	Jun 29	Jul 3
HARNEY BASIN	Silvies near Burns	400	May 1	May 5
		200	May 17	May 21
		100	Jun 5	Jun 9
		50	Jun 19	Jun 23
	Donner und Blitzen	200	Jun 11	Jun 15
		100	Jul 1	Jul 5

* Average cfs forecast to flow for this two-week period.

** Average cfs for period of record.

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

State

- Oregon Department of Water Resources
- Oregon State University
- Soil and Water Conservation Districts of Oregon

Federal

- U.S. Department of Agriculture
  - Extension Service
  - Forest Service
- U.S. Department of Army
  - Corps of Engineers
- U.S. Department of Commerce
  - NOAA, National Weather Service
- U.S. Department of Energy
  - Bonneville Power Administration
- U.S. Department of the Interior
  - Bureau of Land Management
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey

Local

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- City of Baker
- City of La Grande
- City of Portland
- City of The Dalles
- City of Walla Walla
- Douglas County Water Resources Survey
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control – Owyhee Project
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control – Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale – Oregon Irrigation District
- Warmsprings Irrigation District

Private

- Pacific Power and Light Company
- Portland General Electric Company
- The Crag Rats, Hood River, Oregon

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

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986/6

WATER SUPPLY OUTLOOK

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United States
Department of
Agriculture

**Soil
Conservation
Service**

Portland,
Oregon

Oregon
Water Supply Outlook

June 2, 1986

Foreword

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

Oregon
Water Supply Outlook

and

Federal – State – Private
Cooperative Snow Surveys

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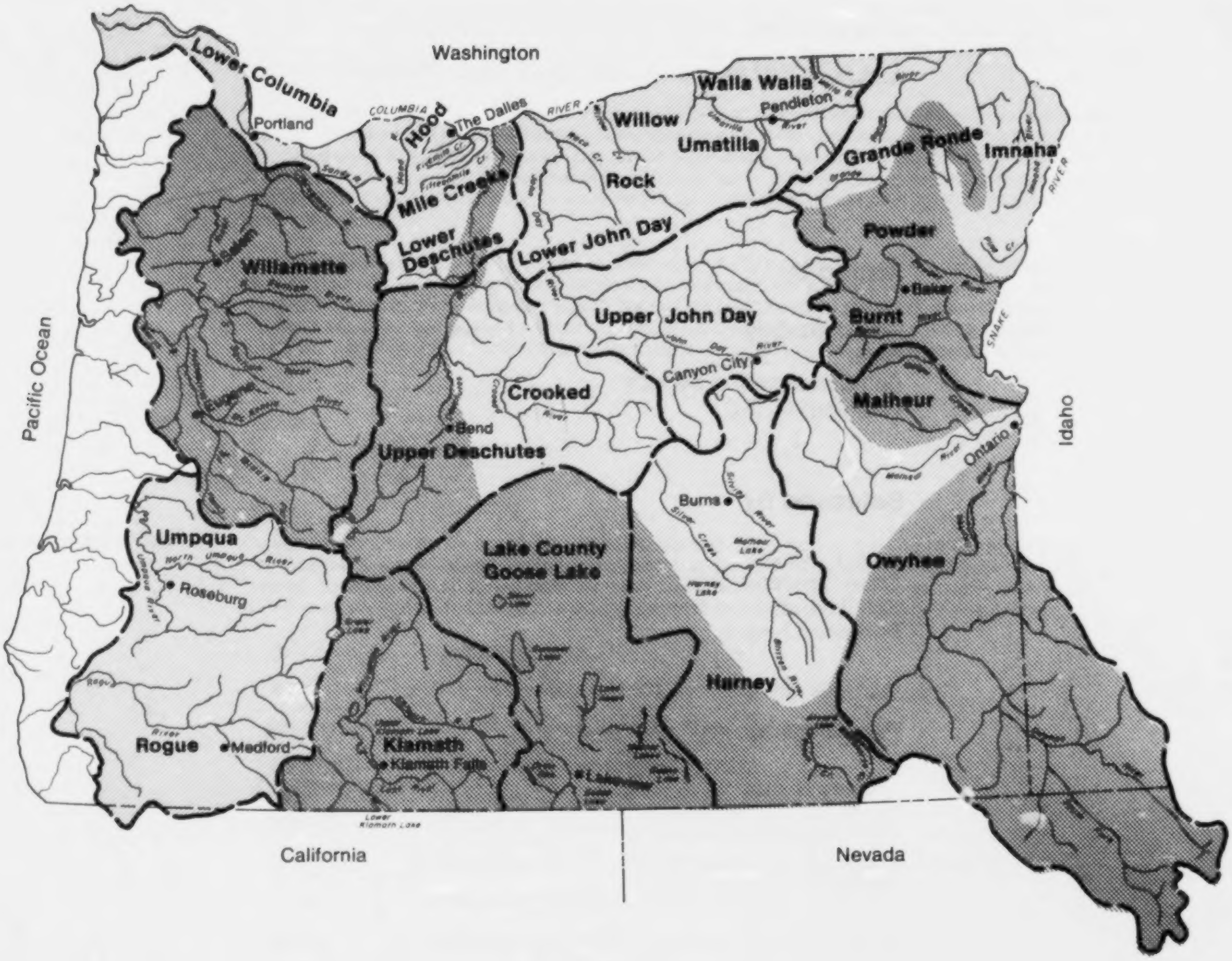
Streamflow Prospects for Oregon

Spring and Summer Period



Streamflow Prospects

■	Much above average:	(>130%)
▨	Above average:	(110-130%)
▩	Near average:	(90-110%)
▧	Below average:	(70-90%)
▦	Much below average:	(<70%)
☐	Not forecast	

GENERAL OUTLOOK

SUMMARY: STREAMFLOW WILL BE BELOW NORMAL OR NEAR NORMAL THIS SUMMER. MOST OF THE TRANSIENT SNOWPACK IS GONE. MAY PRECIPITATION WAS GOOD OVER MOST OF THE STATE. RESERVOIR STORAGE IS VERY GOOD.

SNOWPACK: Only the very high elevations continue to have snow. The season finished with a poor snowpack west of the Cascades and a near normal snowpack east of the mountain crest. The only exception to the near normal snowpack is eastern Oregon in the Umatilla and Rock Creek area where the snowpack is much below normal.

PRECIPITATION: May precipitation was much above average in western and southeastern Oregon. Below normal amounts were received in the rest of the state. The lowest amount was 53% of average in the Deschutes area and the highest was 179% in Lake County. For the water year to date, most of Oregon had near normal amounts of precipitation. Again, it was southeastern Oregon that had above average amounts (116%-131% of average).

RESERVOIRS: Twenty-nine principal irrigation reservoirs currently contain 3,063,400 acre feet of water. This is 117% of average and 93% of capacity.

STREAMFLOW: May streamflow was near average over most of Oregon. The exception to this was much below normal flows in the John Day area and above average in Malheur County.

Prospective streamflow as percent of average on representative Oregon streams is as follows:

STREAM	PERIOD	% of AVERAGE
Owyhee Net Inflow	May-Sep	97%
Grande Ronde at LaGrande	May-Sep	80%
Umatilla at Pendleton	May-Sep	78%
Deschutes at Benham Falls	May-Sep	90%
Willamette MF Nr Oakridge	May-Sep	94%
Rogue at Raygold	May-Sep	85%
Upp Klamath Lk Net Inflow	May-Sep	96%
Silvies Nr Burns	May-Sep	83%

Malheur Lake in Harney County has surpassed last year's record high peak. The lake remained near 4102.5 feet in April and peaked near the end of April at 4102.55 feet. The July 1 forecast is for an elevation of 4102.30 feet and a surface area of 123,000 acres.

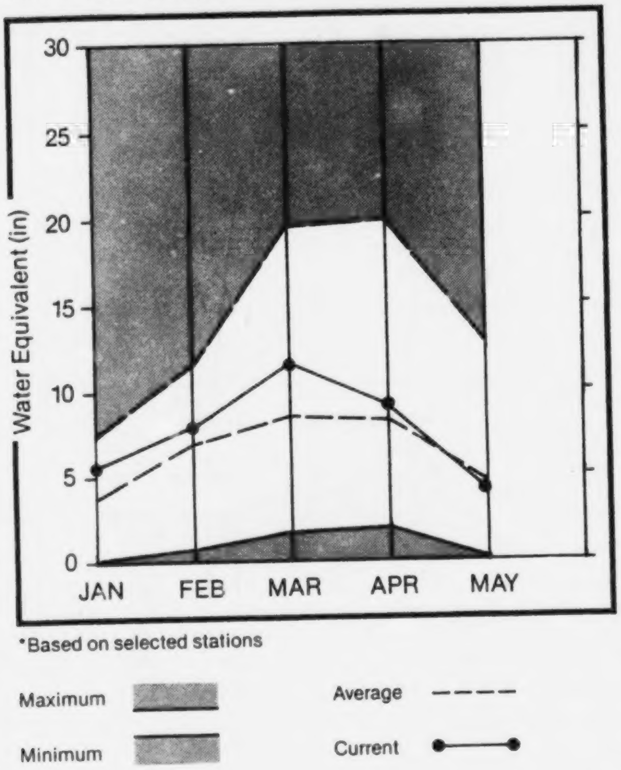
These forecasts assume normal weather conditions will occur throughout the forecast period.

The forecasts in this bulletin are a result of coordinated activity between the Soil Conservation Service and the National Weather Service in an effort to provide the best possible service to water users.

This report contains data furnished by the Oregon Department of Water Resources, US Geological Survey, NOAA, National Weather Service and other cooperators.

Owyhee and Malheur Basins

Mountain snowpack* (inches)



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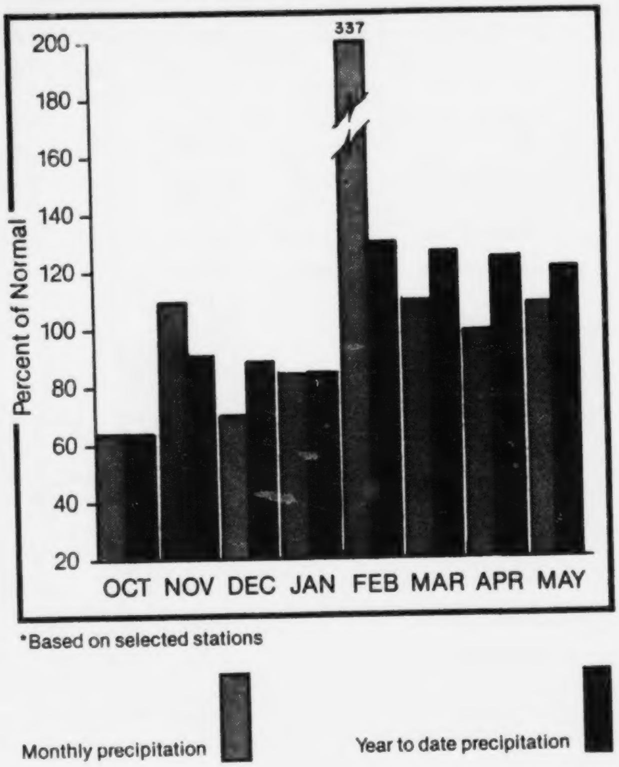


*Based on selected stations

WATER SUPPLY OUTLOOK:

Summer streamflows are forecast to be near normal except for the Malheur which should flow at 85% of normal. Most of the snowpack has melted. May precipitation was 109% of average and it was 121% for the season. Reservoir storage is excellent with all reservoirs in the area containing much above average amounts of water.

For more information contact your local Soil Conservation Service office.

OWYHEE AND MALHEUR BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BULLY CREEK at Warmsprings	MAR-MAY	14.4	13.2	92	132	56				
MALHEUR near Drewsey	MAY-JUL	32.6	28.0	86	129	43				
	MAY-SEP	34.3	29.2	85	128	41				
MALHEUR, NORTH FORK at Beulah	MAY-JUL	35.4	31.0	88	138	37				
	MAY-SEP	40.9	35.6	87	132	42				
OWYHEE RESERVOIR net Inflow	MAY-JUL	186.7	181.0	97	137	57				
	MAY-SEP	213.6	207.2	97	137	57				
OWYHEE at Rome	MAY-JUL	189.7	184.0	97	142	52				
SUCCOR CREEK nr Jordan Valley	MAY-JUL	5.1	4.8	94	137	59				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BEULAH RES	60.0	56.2	54.9	48.2
BULLY CREEK	30.0	26.1	26.0	23.1
OWYHEE	715.0	714.0	686.1	599.6
WARMSPRINGS	191.0	166.9	159.7	139.0

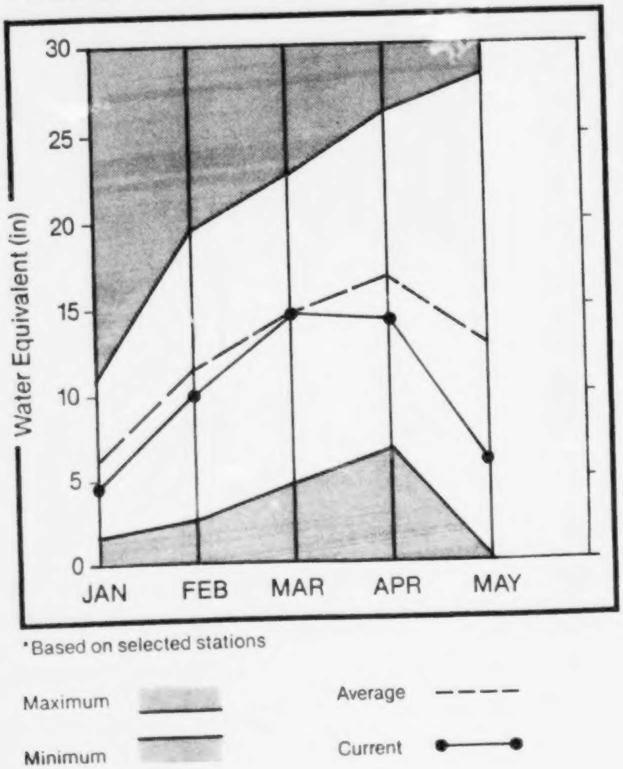
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Owyhee River	0	0	0
Malheur	0	0	0
Jordan Creek	0	0	0
Bully Creek	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

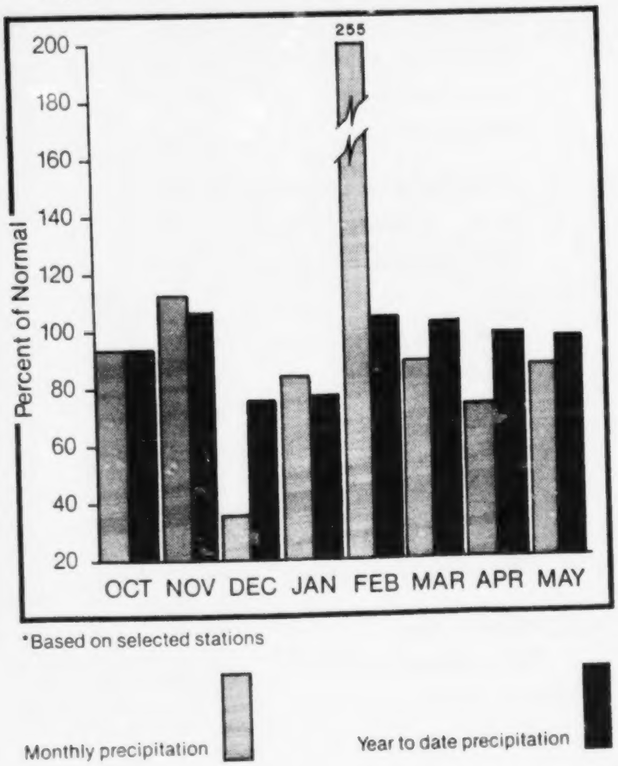
Burnt, Powder, Grande Ronde, and Imnaha Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be near normal this summer except for the Grande Ronde, Imnaha, and Lostine Rivers which should have flows below normal. Aneroid Lake and Mt. Howard are the only SNOTEL sites in the area that are reporting any snow remaining. Precipitation during May was 88% of normal over the entire area. For the Oct-May period it has been 97% of normal. Reservoir storage is much above average.

For more information contact your local Soil Conservation Service office.

BURNT, POWDER, PINE, GRANDE RONDE AND IMNAHA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
ANTHONY CREEK blw NF nr Powder	MAY-JUL	13.5	12.1	90	119	59				
BEAR CREEK near Wallowa	MAY-SEP	57.8	53.7	93	111	74				
BIG CREEK blw Burn Ck	MAY-JUL	6.4	5.8	91	125	63				
BURNT near Hereford	MAY-JUL	15.4	14.3	93	156	39				
	MAY-SEP	16.9	16.0	95	148	41				
CATHERINE CK near Union	MAY-SEP	52.9	48.1	91	110	74				
DEER CK near Sumpter	MAY-JUL	11.2	10.5	94	125	63				
EAGLE CK above Skull Ck	MAY-JUL	146.7	136.4	93	113	73				
	MAY-SEP	161.9	150.6	93	113	73				
GRANDE RONDE at La Grande	MAY-JUL	94.7	76.0	80	115	45				
	MAY-SEP	96.9	79.1	80	115	44				
HURRICANE CK near Joseph	MAY-SEP	43.6	39.2	90	108	71				
IMNAHA at Imnaha	MAY-SEP	248.6	214.0	86	115	57				
LOSTINE near Lostine	MAY-SEP	115.6	99.0	86	103	68				
PINE CREEK near Oxbow	MAY-JUL	143.5	127.2	89	118	59				
POWDER near Sumpter	MAY-JUL	41.0	38.1	93	122	63				
	MAY-SEP	42.2	39.2	93	123	64				
EAST FORK WALLOWA near Joseph	MAY-JUL	8.1	7.7	95	111	74				
	MAY-SEP	10.4	9.9	95	106	77				
WALLOWA at Joseph	MAY-JUL	66.9	63.5	95	141	49				
WOLF CK RESERVOIR net Inflow	MAY-JUN	8.5	8.2	96	141	47				

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

RESERVOIR STORAGE (1000AF)

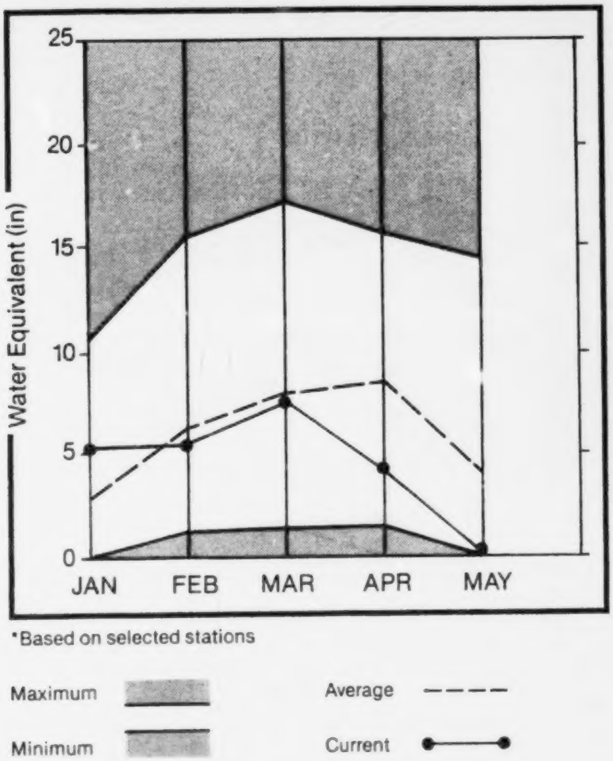
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
PHILLIPS LAKE	73.5	77.4	71.8	43.6
THIEF VALLEY	17.4	18.3	18.0	15.8
UNITY	25.2	23.3	23.9	22.5
WALLOWA LAKE	37.5	35.3	31.7	28.8
WOLF CREEK	10.4	10.9	11.1	---

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Grande Ronde ab LaGrande	0	0	0
Powder River	0	0	0
Wallowa,Imnaha,Catherine	0	0	0
Burnt River	0	0	0

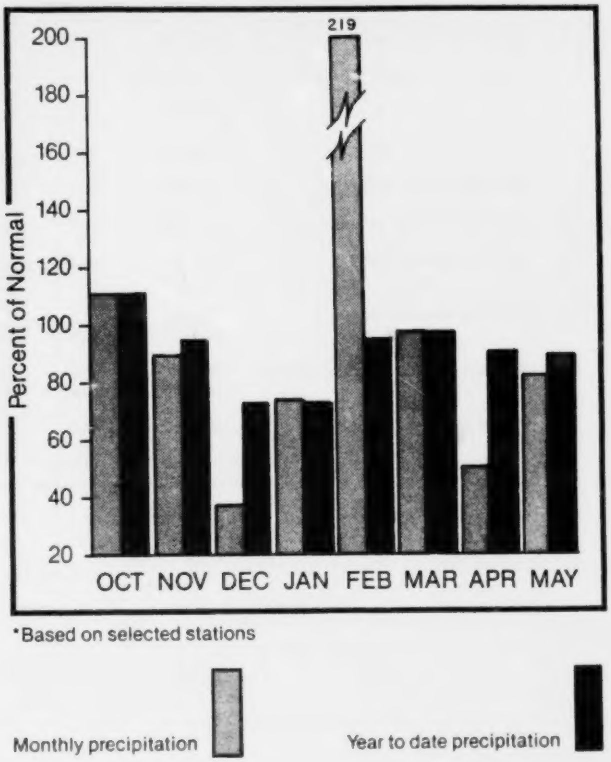
Umatilla, Walla Walla, Willow, Rock, and Lower John Day Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Summer streamflows are forecast to be the lowest in the state with a range of 74% - 84% of average. Most of the snow is gone. May precipitation was 83% of normal and for the water year to date it is one of the lowest in the state at 90% of normal. Reservoir storage is good for McKay reservoir but Cold Springs is only at 86% of average.

For more information contact your local Soil Conservation Service office.

UMATILLA, WALLA WALLA, WILLOW, ROCK AND LOWER JOHN DAY BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BUTTER CK NEAR PINE CITY	MAY-JUL	3.7	3.0	81	135	54				
COUSE CK nr Milton Freewater	MAY-JUL	1.6	1.3	81	125	62				
MCKAY near Pilot Rock	MAY-SEP	8.3	6.8	82	157	36				
PINE CREEK near Weston	MAY-JUL	0.8	0.6	75	125	30				
RHEA CREEK near Heppner	MAY-JUL	2.2	1.7	77	91	45				
ROCK CREEK above Cayuse Canyon	MAY-JUL	2.4	2.0	83	125	42				
UMATILLA near Gibbon	MAY-JUL	41.3	31.0	75	109	41				
	MAY-SEP	47.6	36.0	76	103	48				
UMATILLA near Pendleton	MAY-JUL	71.5	56.0	78	119	38				
	MAY-SEP	76.9	60.0	78	120	36				
SF WALLA WALLA nr MiltonFreewater	MAY-JUL	38.6	28.9	75	96	54				
	MAY-SEP	52.6	40.0	76	97	55				
WILLOW CREEK near Heppner	MAY-JUL	3.2	2.6	81	125	63				

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

RESERVOIR STORAGE (1000AF)

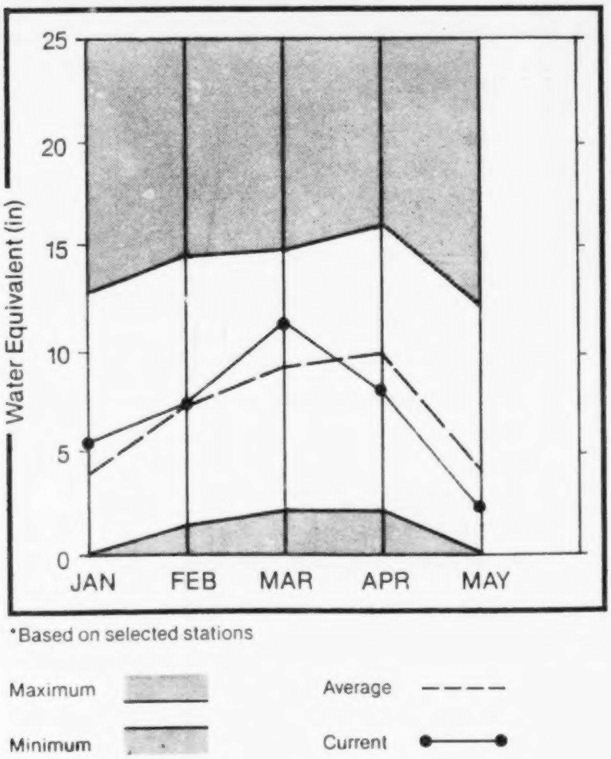
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COLD SPRINGS	50.0	41.2	41.3	48.1
MCKAY	73.8	67.4	66.3	58.5
WILLOW CREEK	1.8	1.9	---	---

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Walla Walla River	0	0	0
Umatilla River	0	0	0
McKay Creek	0	0	0

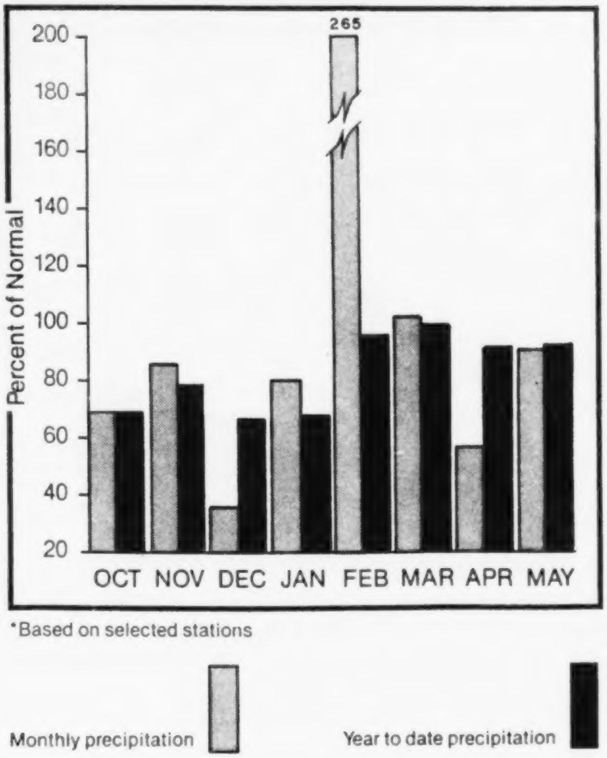
Upper John Day Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be below normal this summer. Some water shortages may occur in late summer. Most of the snow is gone. Precipitation during May was 91% of normal and for the water year to date has been 92%.

For more information contact your local Soil Conservation Service office.

UPPER JOHN DAY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CAMAS CREEK nr Ukiah	MAY-JUL	16.7	13.9	83	132	30				
	MAY-SEP	17.3	14.5	84	133	35				
MF JOHN DAY at Ritter	MAY-JUL	70.1	57.0	81	120	43				
	MAY-SEP	73.9	61.0	83	119	46				
NF JOHN DAY at Monument	MAY-JUL	349.6	297.0	85	108	62				
	MAY-SEP	365.2	280.0	77	100	54				
MOUNTAIN CREEK near Mitchell	MAY-JUL	2.1	1.7	81	95	48				
STRAWBERRY CREEK nr Prairie City	MAY-JUL	6.7	5.9	88	119	60				
	MAY-SEP	7.4	6.5	88	108	68				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

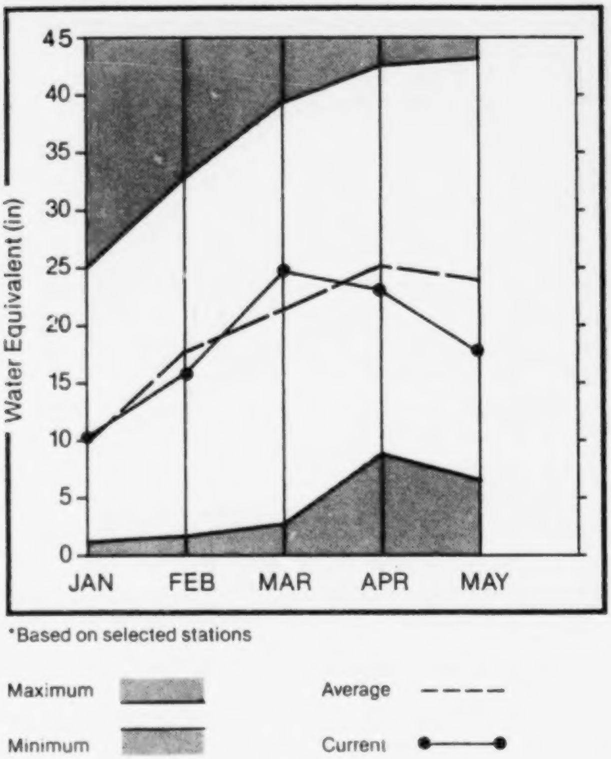
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
John Day, North Fork	0	0	0
John Day above Dayville	0	0	0

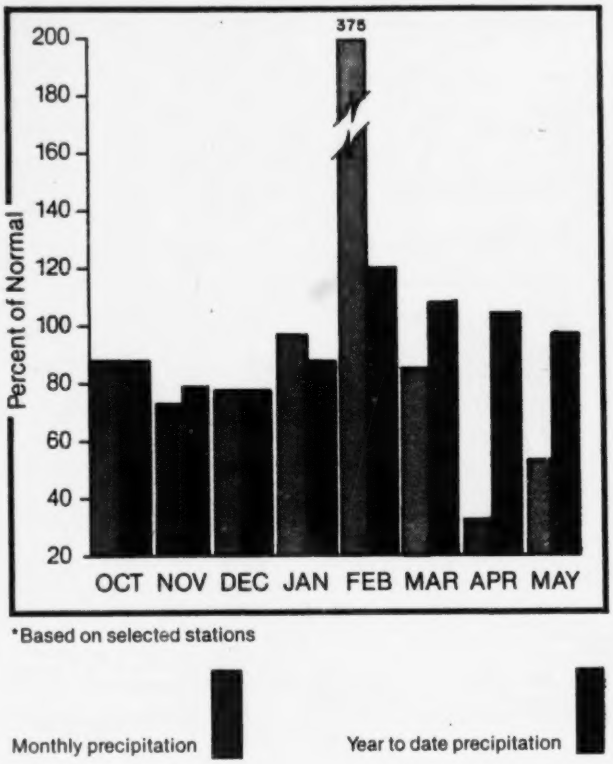
*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Upper Deschutes and Crooked Basins

Mountain snowpack* (inches)



Precipitation* (percent of normal)



WATER SUPPLY OUTLOOK:

Streamflows should be near normal on the Deschutes River system and below normal on the Crooked River. Only the higher elevation snow remains. Irish-Taylor and Summit Lake are the only SNOTEL sites in the area that still have snow. May precipitation was the lowest in the state with only one half the normal amounts being received. Normal precipitation has been received for the water year to date. Reservoir storage is currently above average.

For more information contact your local Soil Conservation Service office.

UPPER DESCHUTES AND CROOKED BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BEAVER CREEK nr Paulina	MAY-JUL	4.8	**4.4**	**92**	125	63				
	MAY-SEP	4.9	**4.5**	**92**	122	61				
CRANE PRAIRIE RES net Inflow	MAY-JUL	60.3	**57.2**	**95**	119	71				
	MAY-SEP	100.1	**95.1**	**95**	119	71				
CRESCENT CK nr Crescent Lake	MAY-JUL	13.8	**12.7**	**92**	167	36				
	MAY-SEP	17.5	**16.1**	**92**	131	51				
CROOKED nr Prineville	MAY-JUL	35.1	**28.1**	**80**	148	34				
	MAY-SEP	35.5	**28.4**	**80**	149	34				
NF CROOKED blw Lookout Ck	MAY-JUL	4.2	**3.5**	**83**	119	48				
DESCHUTES below Bend	AUG-SEP	174.0	**158.5**	**91**	116	66				
DESCHUTES at Benham Falls	MAY-JUL	277.3	**249.0**	**90**	107	73				
	MAY-SEP	464.2	**418.0**	**90**	106	74				
DESCHUTES below Snow Creek	MAY-SEP	53.3	**45.9**	**79**	113	58				
LITTLE DESCHUTES nr Lapine	MAY-JUL	50.7	**45.6**	**90**	108	71				
	MAY-SEP	60.1	**55.2**	**92**	115	68				
OCHOCO RESERVOIR net Inflow	MAY-JUL	8.8	**7.5**	**85**	182	34				
	MAY-SEP	8.9	**7.6**	**85**	180	34				
SQUAW CREEK nr Sisters	MAY-SEP	43.7	**42.0**	**96**	112	80				
TUMALO CREEK near Bend	MAY-SEP	39.6	**36.4**	**92**	106	78				

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

RESERVOIR STORAGE (1000AF)

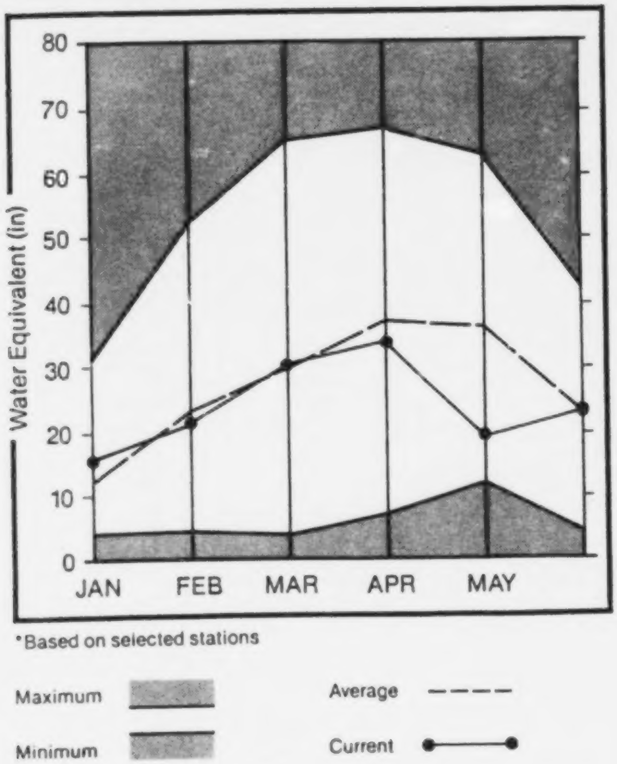
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CRANE PRAIRIE	55.3	**46.0**	53.2	39.3
CRESCENT LAKE	86.9	**80.6**	86.4	58.2
OCHOCO	47.5	**43.0**	41.2	31.6
PRINEVILLE	153.0	**152.1**	154.2	145.8
WICKIUP	200.0	**170.2**	164.5	166.9

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Crooked, Ochoco	0	0	**0**
Deschutes above Wickiup	0	0	**0**
Little Deschutes	0	0	**0**
Tumalo and Squaw Creeks	0	0	**0**

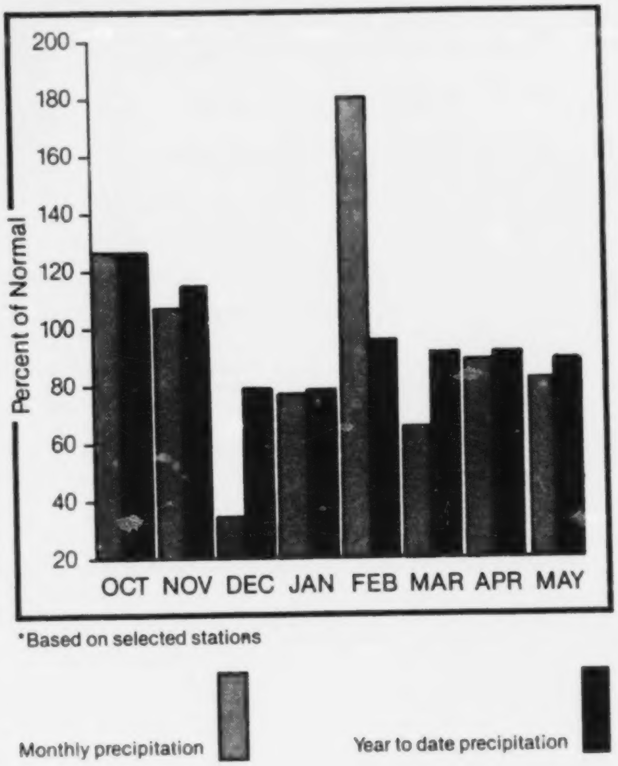
Hood, Mile Creeks, and Lower Deschutes Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be 87% - 88% of average this summer. Only the high elevations still have a snowpack. Mt. Hood Test Site is the only SNOTEL site reporting any snow. May precipitation was 83% of average. At 89% of average, the area received the lowest year to date precipitation. Clear Lake currently has much above average storage.

For more information contact your local Soil Conservation Service office.

HOOD, MILE CREEKS AND LOWER DESCHUTES BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
HOOD RIVER near Tucker Bridge	MAY-JUL	162.7	143.1	88	104	72				
	MAY-SEP	209.8	182.5	87	101	73				
WEST FORK HOOD RIVER nr Dee	MAY-JUL	83.1	73.1	88	103	72				
	MAY-SEP	104.5	91.9	88	103	73				
WHITE RIVER below Tygh Valley	MAY-JUL	77.1	67.0	87	105	69				
	MAY-SEP	92.2	80.2	87	107	67				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (WASCO)	11.9	10.3	9.3	5.6

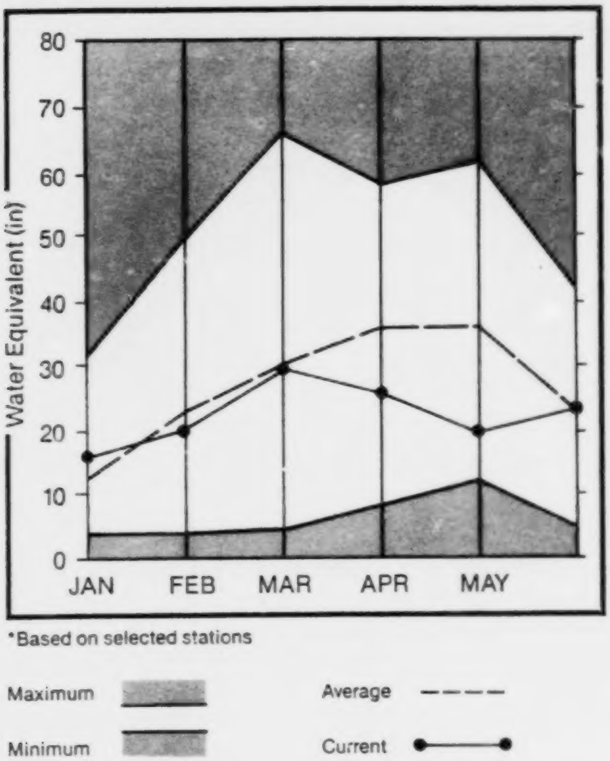
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Hood River	0	0	0
Mile Creeks	0	0	0
White River	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

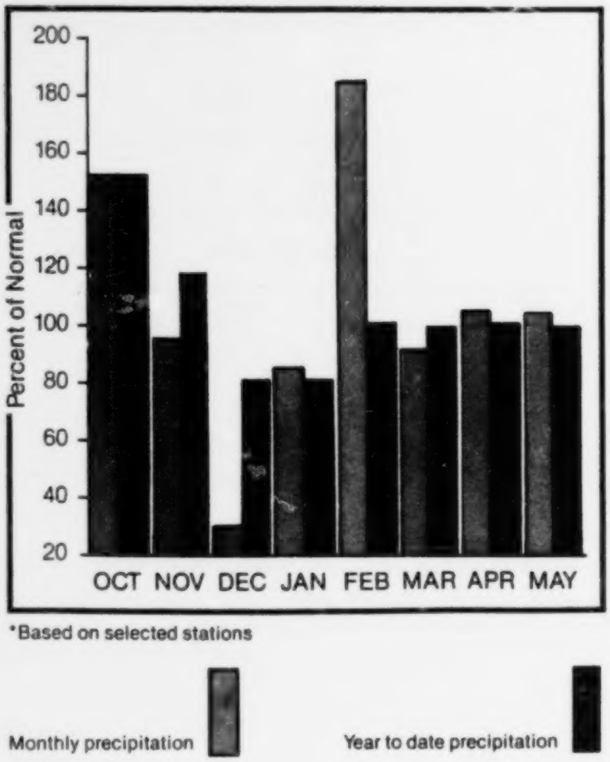
Lower Columbia Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be below normal this summer. The Columbia River at The Dalles flow for Jun-Sep will be 87% of average. Mountain snowpack is gone except for the high elevation sites. May precipitation was 105% of normal. For the water year to date, it has been normal.

For more information contact your local Soil Conservation Service office.

LOWER COLUMBIA BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
COLUMBIA at The Dalles	MAY-JUL	73760.0	62800.0	85	98	72				
	MAY-SEP	88292.0	77800.0	88	101	75				
SANDY RIVER near Marmot	MAY-JUL	221.9	177.5	80	99	61				
	MAY-SEP	275.7	220.0	80	98	62				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

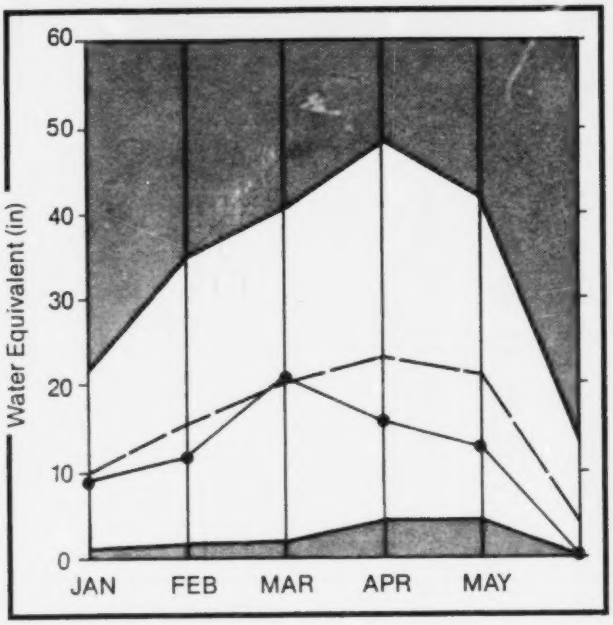
WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Sandy River	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

See Page 29 for Historical Data and Flood Stages.

Willamette Basin

Mountain snowpack* (inches)



*Based on selected stations

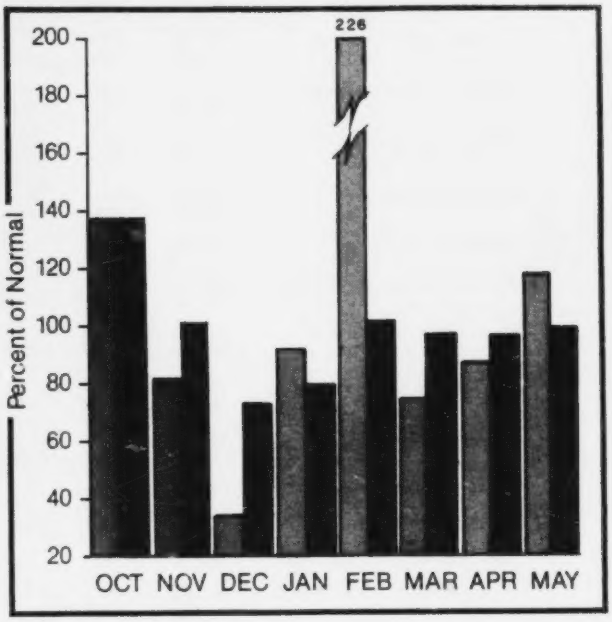
Maximum ▨

Minimum ▨

Average – – – –

Current ●——●

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation ▨

Year to date precipitation ■

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be near normal this year (90% - 98% of normal). The only snow that remains is in the high elevations. Only McKenzie SNOTEL site reports any snow. The Willamette Valley received 118% of normal precipitation during May. For the water year to date, it has been 99%. Irrigation reservoirs in the valley contain near average amounts of stored water.

For more information contact your local Soil Conservation Service office.

WILLAMETTE BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLACKAMAS at Estacada	MAY-JUL	443.2	399.0	90	105	75				
	MAY-SEP	554.8	505.0	91	106	76				
CLACKAMAS above Three Lynx	MAY-JUL	341.0	307.0	90	102	78				
	MAY-SEP	433.4	394.0	91	102	80				
MCKENZIE at McKenzie Bridge	MAY-JUL	323.3	294.1	91	102	80				
	MAY-SEP	466.7	424.7	91	102	80				
MCKENZIE near Vida	MAY-JUL	696.9	627.2	90	103	77				
	MAY-SEP	925.5	832.9	90	103	77				
SF MCKENZIE at Rainbow	MAY-JUL	136.8	123.1	90	105	75				
	MAY-SEP	163.7	147.3	90	107	73				
MOHAWK near Springfield	MAY-JUL	32.6	30.0	92	123	61				
OAK GROVE FORK ab Power Intake	MAY-JUL	94.4	85.0	90	117	64				
	MAY-SEP	131.0	118.0	90	110	70				
ROW near Dorena	MAY-JUL	51.5	46.3	90	136	45				
	MAY-SEP	57.3	51.4	90	136	44				
NORTH SANTIAM at Mehama	MAY-JUL	478.5	431.0	90	120	60				
	MAY-SEP	585.6	533.0	91	106	76				
SOUTH SANTIAM at Waterloo	MAY-JUL	306.7	277.0	90	122	58				
	MAY-SEP	349.9	322.0	92	123	61				
SCOGGINS CREEK near Gaston	MAY-JUL	5.7	5.1	89	123	53				
THOMAS CREEK nr Scio	MAY-JUL	38.2	35.5	93	123	63				
COAST FORK WILLAMETTE nr London	MAY-JUL	14.0	13.2	94	129	57				
MF OF WILLAMETTE bl NF nr Oakridge	MAY-JUL	451.0	420.0	93	108	78				
	MAY-SEP	546.9	515.0	94	109	79				
MF OF MF OF WILLAMETTE nr Oakridge	MAY-JUL	118.1	110.0	93	111	75				
	MAY-SEP	139.7	131.0	94	112	76				
WILLAMETTE at Salem	MAY-JUL	2490.4	2390.0	96	112	80				
	MAY-SEP	2973.8	2820.0	95	113	77				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
BLUE RIVER **	85.5	78.7	78.7	79.8
COTTAGE GROVE **	29.8	28.8	23.6	27.6
COUGAR **	155.2	140.8	143.0	133.2
DETROIT **	300.7	283.5	277.6	276.2
DORENA **	70.5	67.5	59.5	64.9
FALL CREEK **	115.5	108.4	108.1	89.8
FERN RIDGE **	109.6	89.9	91.5	87.4
FOSTER **	29.7	24.8	25.0	25.9
GREEN PETER **	268.2	249.6	247.5	247.1
HILLS CREEK **	200.2	194.6	193.8	183.9
LOOKOUT POINT **	337.0	319.5	321.2	290.6
TIMOTHY LAKE	61.7	60.1	57.7	60.0
HENRY HAGG LAKE	53.0	53.6	51.2	50.2

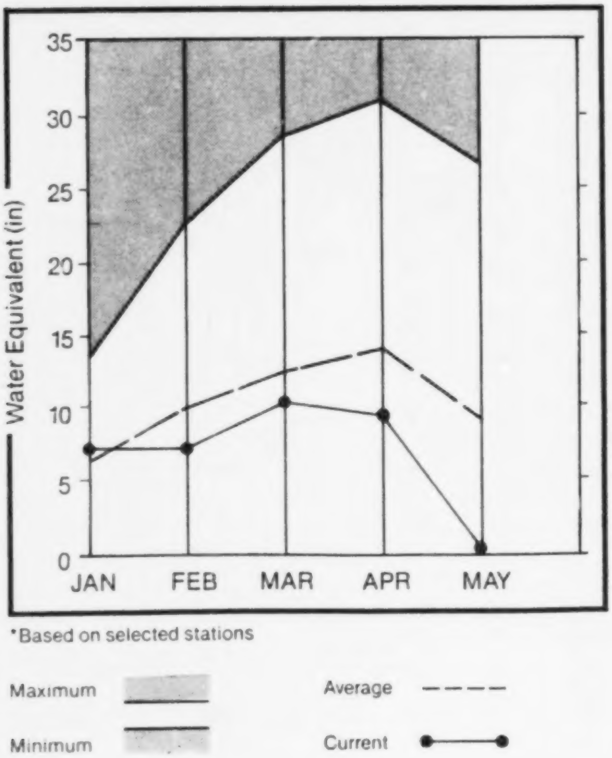
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Clackamas River	0	0	0
McKenzie River	0	0	0
Row River	0	0	0
Santiam River	0	0	0
Willamette, Middle Fork	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

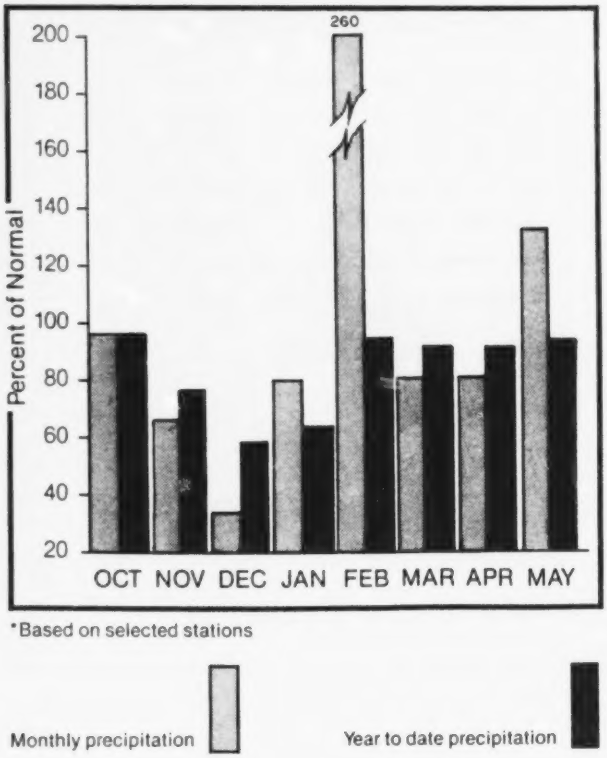
Rogue and Umpqua Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflows are forecast to be below average this summer. They range from 79% to 90% of average. Only the highest elevations still have snow. Annie Springs and Park Headquarters are the only sites that still have a snowpack. May precipitation was very heavy at 133% of average. For the water year to date, it has been 94% of average. Reservoir storage in the area is very good with all reservoirs either full or close to being full.

For more information contact your local Soil Conservation Service office.

ROGUE AND UMPQUA BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
APPLEGATE nr Copper	MAY-JUL	75.6	59.7	79	108	49				
	MAY-SEP	82.4	65.1	79	109	49				
SF BIG BUTTE CK near Butte Falls	MAY-JUL	22.1	19.3	87	118	59				
CLEARWATER above Trap Creek	MAY-SEP	56.8	51.5	91	99	83				
COW CREEK near Azalea	MAY-JUL	8.2	7.3	89	110	61				
FOURMILE LAKE net Inflow	MAY-SEP	3.3	3.0	89	148	30				
GRAVE CREEK at Pease Bridge	MAY-JUL	3.2	2.8	88	125	63				
HYATT PRAIRIE RES net Inflow	MAY-JUL	2.5	2.2	88	120	40				
ILLINOIS near Kerby	MAY-JUL	85.2	71.6	84	124	45				
	MAY-SEP	92.3	77.5	84	122	46				
NF LITTLE BUTTE CK nr Lakecreek	MAY-JUL	7.1	6.1	86	141	28				
	MAY-SEP	11.3	9.7	86	142	27				
RED BLANKET CK nr Prospect	MAY-JUL	25.9	22.3	86	116	58				
ROGUE RIVER ab Prospect	MAY-JUL	178.1	151.0	85	101	69				
	MAY-SEP	232.6	195.0	84	99	69				
SF ROGUE near Prospect	MAY-JUL	45.5	39.1	86	110	62				
	MAY-SEP	55.6	47.8	86	110	63				
ROGUE RIVER at Raygold	MAY-JUL	483.9	411.0	85	106	64				
	MAY-SEP	642.1	540.0	84	103	65				
ROGUE RIVER at Grants Pass	MAY-JUL	498.9	424.0	85	108	62				
	MAY-SEP	616.7	524.0	85	108	62				
SUCKER CREEK bl Little Grayback	MAY-JUL	34.7	28.4	82	112	52				
NORTH UMPQUA nr Tokatee Falls	MAY-SEP	137.7	118.0	86	99	73				
NORTH UMPQUA at Winchester	MAY-JUL	469.5	404.0	86	111	61				
SOUTH UMPQUA at Brockway	MAY-JUL	180.5	153.0	85	110	60				
SOUTH UMPQUA near Tiller	MAY-JUL	100.0	85.0	85	105	65				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
APPLEGATE	75.2	72.4	73.8	---
EMIGRANT LAKE	39.0	37.5	35.4	35.4
FISH LAKE	8.0	7.8	6.7	6.5
FOURMILE LAKE	16.1	15.4	---	11.9
HOWARD PRAIRIE	60.0	60.3	60.6	53.9
HYATT PRAIRIE	16.1	16.1	15.5	14.7
LOST CREEK **	315.0	313.0	306.4	---

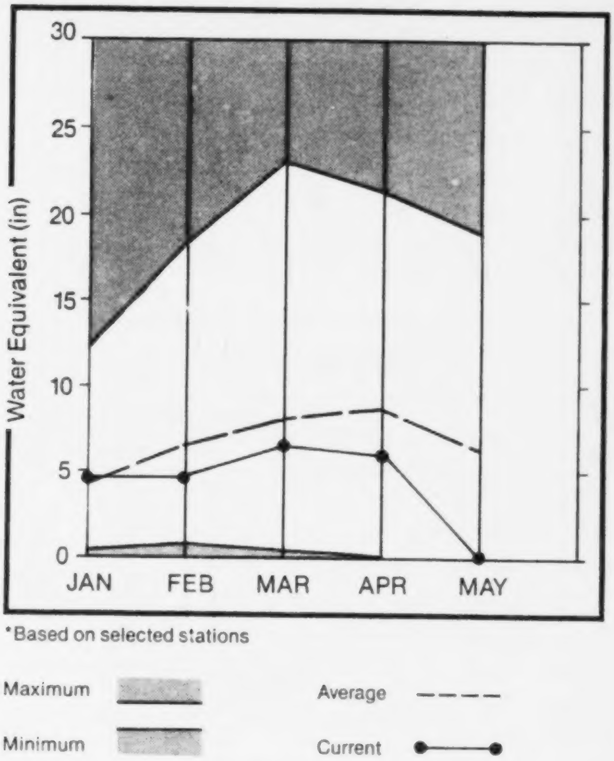
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Applegate River	0	0	0
Bear Creek	0	0	0
Butte Creek	0	0	0
Illinois River	0	0	0
North Umpqua River	0	0	0
Rogue River	0	0	0
Mt. Ashland	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

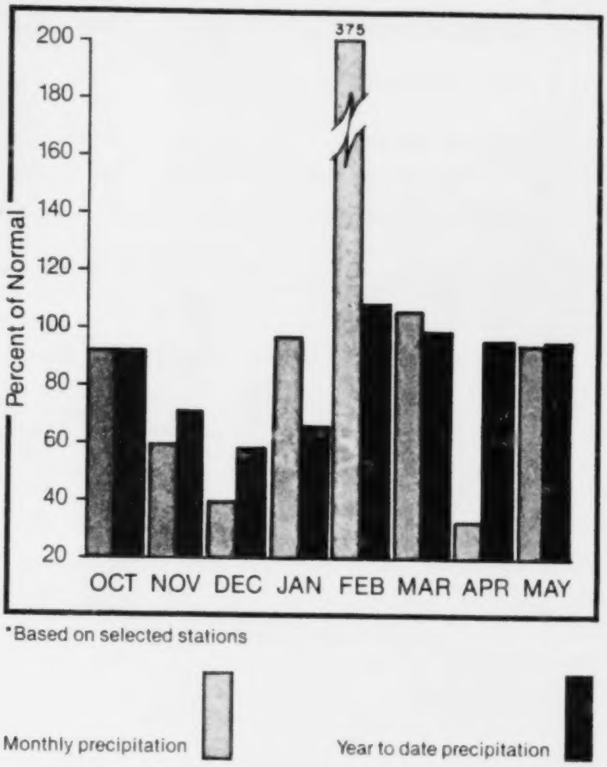
Klamath Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Streamflow in Klamath County should be near normal this summer. Most of this year's snow is gone. Precipitation in the county has been about 95% for the month of May and also for the water year to date. Current reservoir storage is excellent.

For more information contact your local Soil Conservation Service office.

KLAMATH BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLEAR LAKE net Inflow	MAY-JUL	15.5	14.4	93	161	32				
	MAY-SEP	18.0	16.8	93	161	39				
GERBER RESERVOIR net Inflow	MAY-JUL	4.3	4.0	93	163	47				
	MAY-SEP	4.7	4.4	94	149	43				
SPRAGUE near Chiloquin	MAY-SEP	155.9	148.1	95	117	73				
UPPER KLAMATH LAKE net Inflow	MAY-SEP	331.0	320.0	97	117	77				
WILLIAMSON near Chiloquin	MAY-SEP	269.4	259.0	96	117	75				

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

RESERVOIR STORAGE (1000AF)

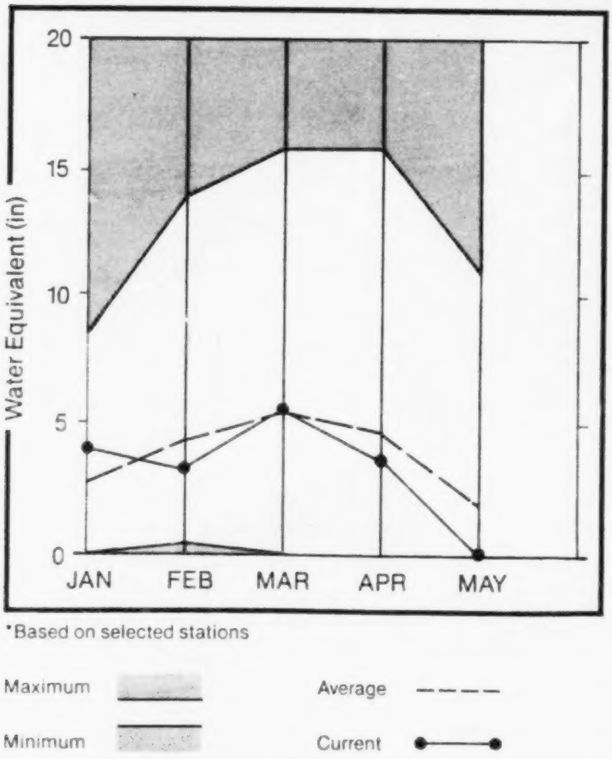
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLEAR LAKE (CALIF)	513.3	407.5	384.9	256.5
GERBER	94.3	86.4	87.4	64.9
UPPER KLAMATH LAKE	523.7	502.5	498.3	516.3

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
Lost River	0	0	0
Sprague River	0	0	0
Upper Klamath Lake	0	0	0
Williamson River	0	0	0

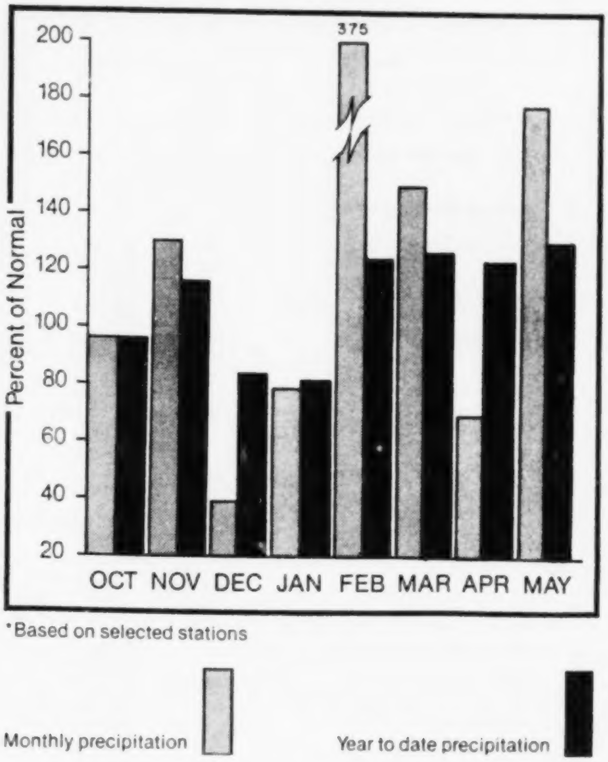
Lake County and Goose Lake Basins

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Lake County should have the greatest streamflow in the state this summer (as a percent of average). The forecasts range from 96% to 107% of average. Most of the snow has melted for the season. Lake County has received the greatest precipitation (again, as a percent of average) in the state for the month of May (179%) and for the winter season (131%). Reservoir storage is excellent with all reservoirs nearly full.

For more information contact your local Soil Conservation Service office.

LAKE COUNTY AND GOOSE LAKE BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
BRIDGE CREEK at Spahr Ranch	MAY-JUL	3.0	3.2	107	167	67				
CHEWAUCAN near Paisley	MAY-JUL	53.2	53.2	100	143	58				
	MAY-SEP	57.1	57.1	100	138	61				
COTTONWOOD CK near Lakeview	MAY-JUL	6.0	6.0	100	150	50				
DEEP CREEK near Adel	MAY-JUL	42.8	42.8	100	147	51				
	MAY-SEP	44.7	44.7	100	148	51				
DREWS RESERVOIR net Inflow	MAY-JUL	9.4	9.0	96	149	43				
HONEY CREEK near Plush	MAY-JUL	11.1	11.3	102	180	36				
	MAY-SEP	11.3	11.5	102	177	35				
SILVER CREEK near Silver Lake	MAY-JUL	8.1	7.9	98	160	37				
TWENTYMILE near Adel	MAY-JUL	10.3	10.3	100	194	39				
	MAY-SEP	10.8	10.8	100	194	37				

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

RESERVOIR STORAGE (1000AF)

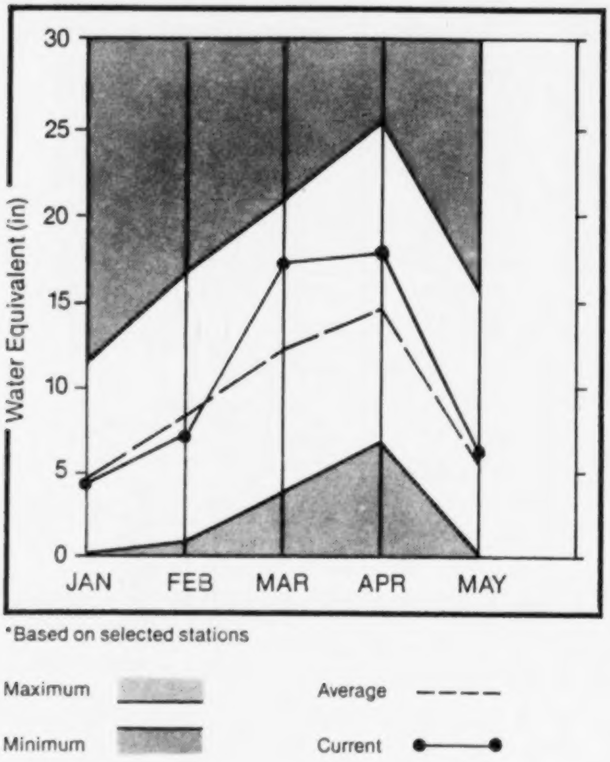
RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COTTONWOOD	8.7	8.5	7.4	6.9
DREWS	63.0	62.1	50.5	54.1
THOMPSON VALLEY	18.4	17.3	17.0	15.0

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Chewaucan River	0	0	0
Deep Creek	0	0	0
Drew Creek	0	0	0
Honey Creek	0	0	0
Silver Creek (Lake Co.)	0	0	0
Twentymile Creek	0	0	0

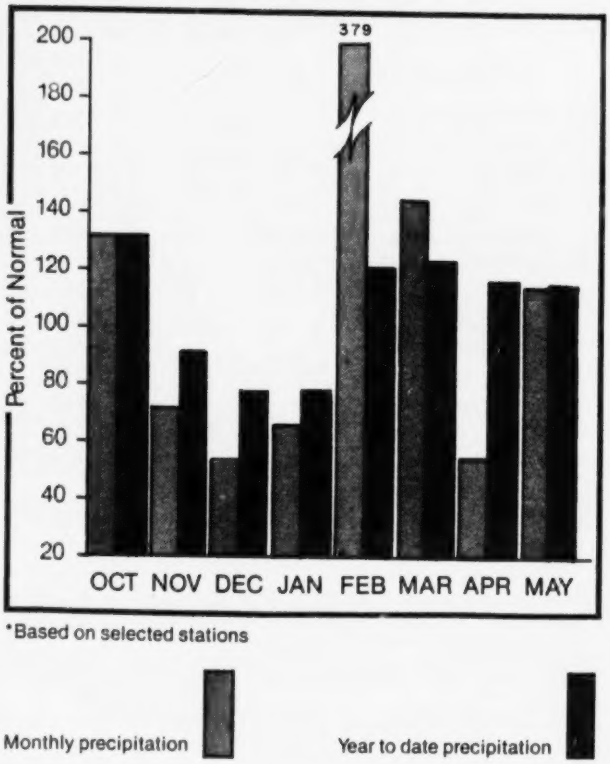
Harney Basin

Mountain snowpack* (inches)



*Based on selected stations

Precipitation* (percent of normal)



*Based on selected stations

WATER SUPPLY OUTLOOK:

Harney County will have below normal streamflow this summer. Just about all the snow is currently gone. Precipitation has been about 115% of average for the month of May and also for the Oct-May period. Malheur Lake is forecast to have a July 1 elevation of 4102.30 feet.

For more information contact your local Soil Conservation Service office.

HARNEY BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
DONNER UND BLITZEN nr Frenchglen	MAY-JUL	42.0	35.0	83	114	52				
	MAY-SEP	47.1	39.0	83	113	53				
SILVER CREEK near Riley	MAY-JUL	5.6	4.7	84	179	36				
SILVIES near Burns	MAY-JUL	36.9	30.7	83	146	33				
	MAY-SEP	38.8	32.3	83	149	34				
TROUT CREEK nr Denio	MAY-JUL	5.9	5.3	90	169	34				
	MAY-SEP	6.9	6.2	90	159	29				

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
Donner und Blitzen River	0	0	0
Silver Creek (Harney Co)	0	0	0
Silvies River	0	0	0
Trout Creek	0	0	0

HISTORICAL DATA (COLUMBIA RIVER AT THE DALLES)

Year	STREAMFLOW (1,000 AF)			REGULATED PEAK (1,000cfs)	DATE
	APR-SEP	APR-JUN	MAY-JUN		
1961	101,940	76,860	66,185	699	JUN 8
1962	95,260	66,516	50,819	460	JUN 5
1963	87,860	58,499	47,812	437	JUN 18
1964	110,422	73,512	63,670	662	JUN 18
1965	114,222	80,098	62,467	520	JUN 9
1966	87,386	58,250	45,962	396	JUN 12
1967	109,319	74,378	66,452	622	JUN 10
1968	89,102	55,593	47,994	404	JUN 13
1969	112,377	85,742	63,899	515	MAY 15
1970	88,243	62,993	55,227	425	MAY 28
1971	126,898	91,781	76,453	557	MAY 13
1972	135,500	97,041	81,451	619	JUN 20
1973	65,549	43,765	36,565	221	DEC 5
1974	139,501	99,035	78,946	588	JUN 20
1975	108,906	73,018	62,861	422	MAY 17
1976	122,771	79,084	62,554	418	MAY 14
1977	54,108	35,505	28,394	213	JAN 25
1978	100,968	67,287	52,035	313	JUN 10
1979	76,700	54,900	44,984	311	MAY 25
1980	91,631	68,229	53,704	345	JUN 18
1961-80 AVG	100,933	70,104	57,422	457	

LOWER COLUMBIA RIVER FLOOD STAGES (WITH 9.5' TIDE AT ASTORIA)

VANCOUVER GAGE (NWS)	FLOW AT THE DALLES (1,000 cfs)	SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32 (1972)	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

ERRATA: 1986 WATER SUPPLY OUTLOOK REPORTS FOR OREGON

STATE-WIDE SUMMARY:

Streamflow:

	Stream	Period	% of Avg	Report
Previously Reported:	Grande Ronde at LaGrande	Mar-Sep	89%	JAN
Correction:	" "	Apr-Sep	"	

BASIN SUMMARY:

Rogue and Umpqua:

		Report
Previously Published:	...water year to date, the precipitation has been 73%.	JAN
Correction:	" " " precipitation has been 59%.	

STREAMFLOW FORECASTS:

	Forecast Point	Period	Avg.	1000 AF	Report
Umatilla, Walla Walla, Willow, Rock and Lower John Day Basins:					
Previously Reported:	Pine Creek nr Weston	Feb-Sep	5.6	4.6	JAN
Correction:	" "	Feb-Jul	"	"	
Previously Published:	SF Walla Walla nr Milton Freewater	Mar-Sep	99.0	90.0	JAN
Correction:	" " "	" "	80.3	72.3	
Previously Published:	SF Walla Walla nr Milton Freewater	Apr-Sep	99.0	89.0	JAN
Correction:	" " "	" "	67.4	60.0	

RESERVOIR STORAGE:

	Reservoir	Usable Capacity	This Yr Storage	20 Yr Avg	Report
Willamette Basin					
Previously Published:	Blue River	85.6			JAN
Correction:	" "	85.5			
Previously Published:	Cottage Grove	30.0			JAN
Correction:	" "	29.8			
Previously Published:	Detroit	299.9			JAN
Correction:	" "	300.7			
Previously Published:	Fall Creek	115.0			JAN
Correction:	" "	115.5			
Previously Published:	Fern Ridge	94.2			JAN
Correction:	" "	109.6			

ERRATA: 1986 WATER SUPPLY OUTLOOK REPORTS FOR OREGON

RESERVOIR STORAGE continued...

Previously Published:	Foster	30.0			JAN
Correction:	" "	29.7			
Previously Published:	Green Peter	270.0			JAN
Correction:	" "	268.2			
Previously Published:	Hills Creek	200.0			JAN
Correction:	" "	200.2			
Previously Published:	Lookout Point	337.2			JAN
Correction:	" "	337.0			

Owyhee and Malheur Basin:

Previously Published:	Owyhee	715.0	706.1	560.8	APR
Correction:	" "	"	"	560.6	
Previously Published:	Owyhee	715.0	713.9	618.4	MAY
Correction:	" "	"	"	606.9	

Burnt, Powder, Pine, Grande Ronde and Imnaha Basins:

Previously Published:	Unity	25.2	25.3	24.1	MAY
Correction:	" "	"	"	24.5	

Upper Deschutes and Crooked Basins:

Previously Published:	Prineville	153.0	153.3	145.8	MAY
Correction:	" "	"	"	147.4	

Rogue and Umpqua Basin:

Previously Published:	Howard Prairie	60.0	50.6	45.1	APR
Correction:	" "	"	60.6	"	

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IMPORTANT NOTICE

WATER SUPPLY OUTLOOK FOR OREGON

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